WEST

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Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences

Search Results -

Term	Documents
PLANT.DWPI,EPAB,JPAB,USPT,PGPB.	413978
PLANTS.DWPI,EPAB,JPAB,USPT,PGPB.	188990
PEANUT.DWPI,EPAB,JPAB,USPT,PGPB.	22344
PEANUTS.DWPI,EPAB,JPAB,USPT,PGPB.	4884
ALLERGEN.DWPI,EPAB,JPAB,USPT,PGPB.	3797
ALLERGENS.DWPI,EPAB,JPAB,USPT,PGPB.	3018
ANTISENSE.DWPI,EPAB,JPAB,USPT,PGPB.	18396
ANTISENSES.DWPI,EPAB,JPAB,USPT,PGPB.	17
RIBOZYME.DWPI,EPAB,JPAB,USPT,PGPB.	4061
RIBOZYMES.DWPI,EPAB,JPAB,USPT,PGPB.	3693
((ALLERGEN SAME (RIBOZYME OR ANTISENSE)) SAME (PEANUT OR PLANT)).USPT,PGPB,JPAB,EPAB,DWPI.	4

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Refine Search: (plant or peanut) same (allergen) same (antisense or ribozyme) Clear

Search History

Today's Date: 1/3/2002

DB Name	Query	Hit Count	Set Name
USPT,PGPB,JPAB,EPAB,DWPI	(plant or peanut) same (allergen) same (antisense or ribozyme)	4	L1

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Generate Collection

Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 5990386 A

L1: Entry 1 of 4 File: USPT Nov 23, 1999

US-PAT-NO: 5990386
DOCUMENT-IDENTIFIER: US 5990386 A

TITLE: Genes controlling floral development and apical dominance in plants

DATE-ISSUED: November 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
An; Gynhueng	Pohang			KRX

US-CL-CURRENT: 800/290; 435/419, 435/468, 536/23.6, 800/278, 800/298

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 5861542 A

L1: Entry 2 of 4 File: USPT Jan 19, 1999

US-PAT-NO: 5861542
DOCUMENT-IDENTIFIER: US 5861542 A

TITLE: Gene controlling floral development and apical dominance in plants

DATE-ISSUED: January 19, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
An; Gynheung	Pullman	WA		

US-CL-CURRENT: 800/278; 435/320.1, 435/419, 435/69.1, 435/70.1, 536/23.6, 800/287, 800/298, 800/320.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: WO 200136621 A2, AU 200119216 A

L1: Entry 3 of 4 File: DWPI May 25, 2001

DERWENT-ACC-NO: 2001-355630
DERWENT-WEEK: 200170

TITLE: Producing transgenic peanut plants that produce allergen-free seeds, useful in non-allergenic foods, by antisense or sense co-suppression of allergen-encoding genes

INVENTOR: ARNTZEN, C J; DODO, H W ; KONAN, K N ; VIQUEZ, O M

PRIORITY-DATA: 1999US-167255P (November 19, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200136621 A2	May 25, 2001	E	072	C12N015/00
AU 200119216 A	May 30, 2001		000	C12N015/00

INT-CL (IPC): C12N 15/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

---

☐ 4. Document ID: DE 19828377 A1

L1: Entry 4 of 4 File: DWPI Dec 30, 1999

DERWENT-ACC-NO: 2000-137877
DERWENT-WEEK: 200013

TITLE: A transgenic non-human mammal expressing immunoglobulin E heavy chain, useful for testing of anti-human IgE antibodies

INVENTOR: YU, P

PRIORITY-DATA: 1998DE-1028377 (June 25, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 19828377 A1	December 30, 1999		010	A01K067/027

INT-CL (IPC): A01K 67/027; C12N 15/85; C12P 21/08

Full | Title | Citation | Front | Review | Classification | Date | Reference | KWIC | Draw Desc | Image

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Term	Documents
PLANT.DWPI,EPAB,JPAB,USPT,PGPB.	413978
PLANTS.DWPI,EPAB,JPAB,USPT,PGPB.	188990
PEANUT.DWPI,EPAB,JPAB,USPT,PGPB.	22344
PEANUTS.DWPI,EPAB,JPAB,USPT,PGPB.	4884
ALLERGEN.DWPI,EPAB,JPAB,USPT,PGPB.	3797
ALLERGENS.DWPI,EPAB,JPAB,USPT,PGPB.	3018
ANTISENSE.DWPI,EPAB,JPAB,USPT,PGPB.	18396
ANTISENSES.DWPI,EPAB,JPAB,USPT,PGPB.	17
RIBOZYME.DWPI,EPAB,JPAB,USPT,PGPB.	4061
RIBOZYMES.DWPI,EPAB,JPAB,USPT,PGPB.	3693
((PLANT OR PEANUT) SAME (ALLERGEN) SAME (ANTISENSE OR RIBOZYME)).USPT,PGPB,JPAB,EPAB,DWPI.	4

There are more results than shown above. Click here to view the entire set.

Display 10 Documents, starting with Document: 4

Display Format: CIT Change Format

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L1: Entry 1 of 4 File: USPT Nov 23, 1999

DOCUMENT-IDENTIFIER: US 5990386 A
TITLE: Genes controlling floral development and apical dominance in plants

DEPR:
Delaying flowering and fruiting. By suppressing the expression of a native OsMADS1 gene by conventional approaches, e.g., by employing antisense, co-suppression, gene replacement, or other conventional approaches to suppressing plant gene expression, flowering and fruiting can be delayed. Delayed reproductive growth can thereby increase the length of the vegetative growth stage and cause the plants to grow faster, since the energy used for development of flowers and seeds can be saved for vegetative growth. Thus, delaying or eliminating reproductive growth results in a higher yield of vegetable species such as spinach, radish, cabbage, or tree species. In addition, such plants will be more desirable for as garden and street species, since their production of pollen allergens can be reduced or eliminated

Bluesheet available in [redacted]415 & at URL http://library.dia[redacted]g.com/bluesheets.
  File 434:SciSearch([redacted]Cited Ref Sci 1974-1989/Dec [redacted]
        (c) 1998 Inst for Sci Info

      Set Items Description
      --- ----- -----------
? s peanut and allergen and (antisens? or ribozym?)

           49964 PEANUT
           69834 ALLERGEN
           74308 ANTISENS?
           15553 RIBOZYM?
      S1   3 PEANUT AND ALLERGEN AND (ANTISENS? OR RIBOZYM?)
? rd

>>>Duplicate detection is not supported for File 306.

>>>Records from unsupported files will be retained in the RD set.
>>>Record 266:276164 ignored; incomplete bibliographic data, not retained -
in RD set
>>>Record 266:267314 ignored; incomplete bibliographic data, not retained -
in RD set
...completed examining records
      S2   1 RD (unique items)
? t s2/3,ab/all

>>>No matching display code(s) found in file(s): 65, 306

 2/3,AB/1   (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2002 Inst for Sci Info. All rts. reserv.

05415730   Genuine Article#: VX188   Number of References: 117
Title: ASSESSMENT OF ALLERGENIC POTENTIAL OF FOODS DERIVED FROM
    GENETICALLY-ENGINEERED CROP PLANTS
Author(s): METCALFE DD; ASTWOOD JD; TOWNSEND R; SAMPSON HA; TAYLOR SL;
    FUCHS RL
Corporate Source: MONSANTO CO/ST LOUIS//MO/63198; PIONEER HI BRED INT
    INC/JOHNSTON//IA/50131; JOHNS HOPKINS UNIV/BALTIMORE//MD/21218; UNIV
    NEBRASKA/LINCOLN//NE/68583
Journal: CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION, 1996, V36, S, P
    S165-S186
ISSN: 1040-8398
Language: ENGLISH   Document Type: REVIEW
? s plant and allergen and (antisens? or ribozym?)

         4298099 PLANT
           69834 ALLERGEN
           74308 ANTISENS?
           15553 RIBOZYM?
      S3   31 PLANT AND ALLERGEN AND (ANTISENS? OR RIBOZYM?)
? rd

>>>Duplicate detection is not supported for File 306.

>>>Records from unsupported files will be retained in the RD set.
>>>Record 266:276164 ignored; incomplete bibliographic data, not retained -
in RD set
>>>Record 266:267314 ignored; incomplete bibliographic data, not retained -
in RD set
...completed examining records
      S4   21 RD (unique items)
? t s4/3,ab/all

>>>No matching display code(s) found in file(s): 65, 306

4/3,AB/1 (Item 1 m file: 155)
DIALOG(R)File 155:MEDLINE(R)

11284451 21203237 PMID: 11306924
Reduction in allergenicity of grass pollen by genetic engineering.
Bhalla PL; Swoboda I; Singh MB
Plant Molecular Biology and Biotechnology Laboratory, Institute of Land and Food Resources, University of Melbourne, Parkville, Australia. p.bhalla@landfood.unimelb.edu.au
International archives of allergy and immunology (Switzerland) Jan-Mar 2001, 124 (1-3) p51-4, ISSN 1018-2438 Journal Code: BJ7
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: Hay fever and allergic asthma triggered by grass pollen allergens affect approximately 20% of the population in cool temperate climates. Ryegrass is the dominant source of allergens due to its prodigious airborne pollen production. Lol p 5 or group 5 is among the most important and widespread grass pollen **allergen** because it reacts with IgE antibodies of more than 90% of grass pollen-allergic patients, contains most of the grass pollen-specific IgE epitopes and elicits strong biological responses. Significant efforts have been made in developing diagnostic and therapeutic reagents for designing new and more effective immunotherapeutic strategies for treatment of allergic diseases. An alternative approach to this problem could be to reduce the amount of **allergen** content in the source **plant**. METHODS: High velocity microprojectile bombardment was used to genetically engineer ryegrass. **Antisense** construct targeted to one of major **allergen**, Lol p 5, was introduced. The expression of **antisense** RNA was regulated by a pollen-specific promoter. Pollen was analysed for IgE reactivity. RESULTS: Analysis of proteins with **allergen**-specific monoclonal and polyclonal antibodies did not detect Lol p 5 in the transgenic pollen. The transgenic pollen showed remarkably reduced allergenicity as reflected by low IgE binding capacity of pollen extract as compared to control pollen. The transgenic ryegrass plants in which Lol p 5 gene expression is perturbed showed normal fertile pollen development. CONCLUSIONS: Our studies showed that it is possible to selectively 'switch off' **allergen** production in pollen of ryegrass demonstrating feasibility of genetic engineering of plants for reduced allergenicity. Copyright 2001 S. Karger AG, Basel

4/3,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09917432 98439526 PMID: 9768590
The latex **allergen** Hev b 5 transcript is widely distributed after subcutaneous injection in BALB/c mice of its DNA vaccine.
Slater JE; Paupore E; Zhang YT; Colberg-Poley AM
Center for the Molecular Mechanisms of Disease Research, Children's Research Institute, Department of Allergy, Immunology, and Pulmonary Medicine, Washington, DC, USA.
Journal of allergy and clinical immunology (UNITED STATES) Sep 1998, 102 (3) p469-75, ISSN 0091-6749 Journal Code: H53
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: DNA vaccines reduce IgE responses to selected allergens, but severe reactions to the expressed antigen may limit the usefulness of the technique in **allergen** immunotherapy. OBJECTIVE: We sought to determine the extent of spread of an injected DNA vaccine in mice. METHODS: We placed the gene encoding the potent Hevea latex **allergen** Hev b 5 in a mammalian expression vector and injected this DNA vaccine subcutaneously into BALB/c mice. At several times after injection, the presence of Hev b 5 transcript was determined in multiple tissues by

RT-PCR. The identity of the amplification product was confirmed by Southern hybridization and restriction analyses. RESULTS: Hev b 5 RNA appeared at the injection site and in the lymph nodes, spleen, and lungs within 1 day after injection and persisted for at least 14 days. Hev b 5 RNA was also identified in the blood and tongue 14 days after injection. Antibody and cell-mediated responses to Hev b 5 were also noted in the immunized animals at later time points. As expected, animals injected with the identical plasmid containing the Hev b 5 DNA in the **antisense** orientation mounted no immune response to Hev b 5. CONCLUSIONS: The rapid and widespread appearance of the Hev b 5 transcript in the injected mice confirms that DNA is translocated from the injection site, transcribed, and expressed in immune and nonimmune tissues after injection. Controlling the extent and degree of expression in specific target tissues may allow therapeutic DNA vaccination with plasmids that encode potentially toxic allergens.

4/3,AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09129710 97141195 PMID: 8987539
Rice allergenic protein and molecular-genetic approach for hypoallergenic rice.
Nakamura R; Matsuda T
Department of Applied Biological Sciences, School of Agricultural Science, Nagoya University, Japan.
Bioscience, biotechnology, and biochemistry (JAPAN) Aug 1996, 60 (8) p1215-21, ISSN 0916-8451 Journal Code: BDP
Languages: ENGLISH
Document type: Journal Article; Review; Review, Tutorial
Record type: Completed
Allergenic proteins with a molecular mass of about 14 to 16 kDa were isolated from a rice salt-soluble fraction based on the reactivity with IgE antibodies from patients allergic to rice. cDNA clones encoding these allergenic proteins were isolated from a cDNA library of maturing rice seeds, and the deduced amino acid sequences showed considerable similarity to wheat and barley alpha-amylase/trypsin inhibitors, which have recently been identified as major allergens associated with baker's asthma. An **antisense** RNA strategy was applied to repress the **allergen** gene expression in maturing rice seeds. Immunoblotting and ELISA analyses of the seeds using a monoclonal antibody to a 16-kDa **allergen** showed that **allergen** content of seeds from several transgenic rice plants was markedly lower than that of the seeds from parental wild type rice.

4/3,AB/4 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10751984 BIOSIS NO.: 199799373129
Environmental risk evaluation of transgenic rice expressing an **antisense** gene for 16kDa albumin (I).
AUTHOR: Tada Yuichi(a); Yamada Minoru; Sawada Rinpei; Samoto Shiro; Matsuda Tsukasa; Adachi Takahiro; Nakamura Ryo; Takahashi Masayoshi(a); Fujimura Tatsuhito; Shimada Hiroaki
AUTHOR ADDRESS: (a)Mitsui Plant Biotechnology Inst., Tsukuba 305**Japan
JOURNAL: Breeding Science 46 (4):p403-407 1996
RECORD TYPE: Citation
LANGUAGE: Japanese; Non-English
SUMMARY LANGUAGE: Japanese; Non-English
1996

4/3,AB/5 (Item 1 from file: 10)
DIALOG(R)File 10:AGRICOLA

3841614 22054836 Holding Library: AGL
Antisense -mediated silencing of a gene encoding a major ryegrass pollen **allergen**
Bhalla, P.L. Swoboda, I.; Singh, M.B.
University of Melbourne, Parkville, Victoria, Australia.
Washington, D.C. : National Academy of Sciences,
Proceedings of the National Academy of Sciences of the United States of America. Sept 28, 1999. v. 96 (20) p. 11676-11680.
ISSN: 0027-8424 CODEN: PNASA6
DNAL CALL NO: 500 N21P
Language: English

Type 1 allergic reactions, such as hay fever and allergic asthma, triggered by grass pollen allergens are a global health problem that affects approximately equal to 20% of the population in cool, temperate climates. Ryegrass is the dominant source of allergens because of its prodigious production of airborne pollen. Lol p 5 is the major allergenic protein of ryegrass pollen, judging from the fact that almost all of the individuals allergic to grass pollen show presence of serum IgE antibodies against this protein. Moreover, nearly two-thirds of the IgE reactivity of ryegrass pollen has been attributed to this protein. Therefore, it can be expected that down-regulation of Lol p 5 production can significantly reduce the allergic potential of ryegrass pollen. Here, we report down-regulation of Lol p 5 with an **antisense** construct targeted to the Lol p 5 gene in ryegrass. The expression of **antisense** RNA was regulated by a pollen-specific promoter. Immunoblot analysis of proteins with **allergen** -specific antibodies did not detect Lol p 5 in the transgenic pollen. The transgenic pollen showed remarkably reduced allergenicity as reflected by low IgE binding capacity of pollen extract as compared with that of control pollen. The transgenic ryegrass plants in which Lol p 5 gene expression is perturbed showed normal fertile pollen development, indicating that genetic engineering of hypoallergenic grass plants is possible.

4/3,AB/6 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

09691196 Genuine Article#: 435PG Number of References: 80
Title: Genetic modification and **plant** food allergens: risks and benefits (ABSTRACT AVAILABLE)
Author(s): Shewry PR (REPRINT) ; Tatham AS; Halford NG
Corporate Source: Univ Bristol,Dept Agr Sci, IACR, Long Ashton Res Stn,Bristol BS41 9AF/Avon/England/ (REPRINT); Univ Bristol,Dept Agr Sci , IACR, Long Ashton Res Stn,Bristol BS41 9AF/Avon/England/
Journal: JOURNAL OF CHROMATOGRAPHY B, 2001 V756, N1-2 (MAY 25), P327-335
ISSN: 0378-4347 Publication date: 20010525
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS
Language: English Document Type: REVIEW

Abstract: **Plant** genetic engineering has the potential to both introduce new allergenic proteins into foods and remove established allergens. A number of allergenic **plant** proteins have been characterized, showing that many are related to proteins which have potentially valuable properties for use in nutritional enhancement, food processing and crop protection. It is therefore important to monitor the allergenic potential of proteins used for **plant** genetic engineering and major biotechnology companies have established systems for this. Current technology allows gene expression to be down-regulated using **antisense** or co-suppression and future developments may allow targeted gene mutation or gene replacement. However, the application of this technology may be limited at least in the short term by the presence of multiple allergens and their contribution to food processing or other properties. Furthermore, the

long-term stability of these systems needs to be established as reversion could have serious consequences. (C) 2001 Elsevier Science B.V. All rights reserved.

4/3,AB/7 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2002 Inst for Sci Info. All rts. reserv.

05415730 Genuine Article#: VX188 Number of References: 117
Title: ASSESSMENT OF ALLERGENIC POTENTIAL OF FOODS DERIVED FROM GENETICALLY-ENGINEERED CROP PLANTS
Author(s): METCALFE DD; ASTWOOD JD; TOWNSEND R; SAMPSON HA; TAYLOR SL; FUCHS RL
Corporate Source: MONSANTO CO/ST LOUIS//MO/63198; PIONEER HI BRED INT INC/JOHNSTON//IA/50131; JOHNS HOPKINS UNIV/BALTIMORE//MD/21218; UNIV NEBRASKA/LINCOLN//NE/68583
Journal: CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION, 1996, V36, S, P S165-S186
ISSN: 1040-8398
Language: ENGLISH Document Type: REVIEW

4/3,AB/8 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2002 Inst for Sci Info. All rts. reserv.

05133932 Genuine Article#: VC466 Number of References: 28
Title: REDUCTION OF 14-16 KDA ALLERGENIC PROTEINS IN TRANSGENIC RICE PLANTS BY **ANTISENSE** GENE (Abstract Available)
Author(s): TADA Y; NAKASE M; ADACHI T; NAKAMURA R; SHIMADA H; TAKAHASHI M; FUJIMURA T; MATSUDA T
Corporate Source: MITSUI TOATSU CHEM CO LTD,INST LIFE SCI,PLANT BIOTECHNOL DEPT,1144 TOGO/MOBARA 297//JAPAN/; MITSUI TOATSU CHEM CO LTD,INST LIFE SCI,PLANT BIOTECHNOL DEPT/MOBARA 297//JAPAN/; NAGOYA UNIV,SCH AGR SCI,DEPT APPL BIOL SCI/NAGOYA/AICHI 46401/JAPAN/
Journal: FEBS LETTERS, 1996, V391, N3 (AUG 12), P341-345
ISSN: 0014-5793
Language: ENGLISH Document Type: ARTICLE
Abstract: An **antisense** gene strategy was applied to suppress the 14-16 kDa **allergen** gene expression in maturing rice seeds, Gene constructs producing **antisense** RNAs of the 16 kDa **allergen** under the control of some rice seed-specific promoters were introduced into rice by electroporation. Immunoblot and RNA blot analyses of the seeds from the transgenic rice plants using the **allergen**-specific monoclonal antibody and a sequence-specific **antisense** RNA probe demonstrated that the 14-16 kDa **allergen** proteins and their transcripts of the seeds from several transgenic lines were present in much lower in amounts than those of the seeds from parental wild-type rice, The high levels of reduction observed were stably inherited in at least three generations.

4/3,AB/9 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2002 Inst for Sci Info. All rts. reserv.

04914585 Genuine Article#: BF66M Number of References: 17
Title: DETERMINATION OF THE SAFETY OF GENETICALLY-ENGINEERED CROPS (Abstract Available)
Author(s): REDENBAUGH K; HIATT W; MARTINEAU B; EMLAY D
Corporate Source: CALGENE INC,1920 5TH ST/DAVIS//CA/95616
Journal: ACS SYMPOSIUM SERIES, 1995, V605, P72-87
ISSN: 0097-6156
Language: ENGLISH Document Type: REVIEW

Abstract: The safety of FLAVR SAVR(TM) tomatoes was shown by a thorough evaluation and demonstration of substantial equivalence to nongenetically engineered tomato milt. The FLAVR SAVR tomato does not differ from other tomato varieties except for the specific, intended effects of the inserted genes. All data support this conclusion, including molecular analyses, biochemical analyses, nutritional levels, horticultural traits, genetic analyses, field trial results, and **plant** pest risk evaluation. No data indicate or suggest any safety risk.

Calgene also conducted a thorough review and analysis of the use of the kan(r) gene and gene product, APH(3')II, for use as a selectable marker in tomatoes, cotton, and oilseed rape. The data generated concluded that APH(3')II is not a toxin or **allergen**, that the kan(r) gene is highly unlikely to move from the **plant** genome into microorganisms via horizontal gene transfer, that if such transfer could occur the impact would be minimal, and that APH(3')II in transgenic plants will not compromise antibiotic use in humans or animals.

On May 17, 1994, the FDA completed its evaluation of the FLAVR SAVR tomato and the use of APII(3')II, concluding that the tomato ''is as safe as tomatoes bred by conventional means'' (1) and ''that the use of aminoglycoside 3'-phosphotransferase II is safe for use as a processing aid in the development of new varieties of tomato, oilseed rape, and cotton intended for food use'' (2).

4/3,AB/10 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts

03493631 CAB Accession Number: 981602323
Modification of rice grain components by recombinant DNA technology.
Tada, Y.
Life Science Institute, Mitsui Toatsu Chemicals Inc., Togo 1144, Mobara 297, Japan.
Gamma Field Symposia (No. 35): p.5-19
Publication Year: 1996 --
Language: English Summary Language: japanese
Document Type: Journal article
An **antisense** cDNA was constructed of a 16 kDa albumin in rice grains, which was identified as a major **allergen**. The **antisense** gene fused to promoters from the gene itself, the rice starch branching enzyme, rice prolamine or rice glutelin genes were introduced into rice protoplasts by electroporation. Seeds of transformed plants contained 80% less of the allergenic protein. In a second experiment, a 1kb portion of the waxy gene (granule-bound starch synthase) was inserted in **antisense** orientation between the CaMV35 S promoter and the GUS (uidA) gene of pBI221. Transformed plants produced seeds with significantly reduced amylose contents of the grain starch. 17 ref.

4/3,AB/11 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04205759 JICST ACCESSION NUMBER: 99A0494706 FILE SEGMENT: JICST-E
Allergic Conjunctival Disease-Current Perspectives and Unresolved Issues. Possible Pathogenesis of Allergic Conjunctivitis; Virus Infection.
FUJISHIMA HIROSHI (1)
(1) Idhikawa Hosp. Tokyo Dent. Coll.
Atarashii Ganka(Journal of the Eye), 1999, VOL.16,NO.4, PAGE.471-475, FIG.6, TBL.5, REF.14
JOURNAL NUMBER: Y0754AAA ISSN NO: 0910-1810 CODEN: ATGAE

UNIVERSAL DECIMAL CLASSIFICATION: 617.71/.78 616-021+616-056.4
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Jap
DOCUMENT TYPE: Journal
ARTICLE TYPE: Review article
MEDIA TYPE: Printed Publication

4/3,AB/12 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04072864 JICST ACCESSION NUMBER: 99A0582279 FILE SEGMENT: JICST-E
Transgenic wheat having an **antisense** sequence of the **allergen** protein CM16.
ELIBY S (1); SASAKUMA T (1); KONDO K (2)
(1) Yokohama City Univ.; (2) Tokita Seed Co. Ltd, Jpn
Ikushugaku Zasshi(Breeding Science), 1998, VOL.48,bessatsu 2, PAGE.244, FIG.2
JOURNAL NUMBER: Y0311ABU ISSN NO: 0536-3683
UNIVERSAL DECIMAL CLASSIFICATION: 633.11+633.13/.14+633.16 575.113.089
LANGUAGE: English COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Short Communication
MEDIA TYPE: Printed Publication

4/3,AB/13 (Item 3 from file: 94)
DIALOG(R)File 94:JICST-EPlus

03098935 JICST ACCESSION NUMBER: 97A0238441 FILE SEGMENT: JICST-E
Lowering the Content of an Allergic Protein Through Efficient Transformation in Soybean Seed.
TAKANO TETSUO (1); LI T (2); KANEDA YUICHI (3); KITAMURA KEISUKE (4)
(1) Todai Ajiaseibutsushigenkankyoken; (2) Iwate Biotechnol. Res. Center, Kitakami; (3) Meiji Univ., Sch. of Agric.; (4)Minist. of Agric., For. and Fish., Natl. Agric. Res. Cent.
Daizu Tanpakushitsu Kenkyukai Kaishi(Report of the Soy Protein Research Committee), 1996, VOL.17, PAGE.14-18, FIG.3, REF.12
JOURNAL NUMBER: L0927ABU ISSN NO: 0919-9535
UNIVERSAL DECIMAL CLASSIFICATION: 664.38 631.527/.528 575.113.089
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Conference Proceeding
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Gly m Bd 30K is a major allergenic protein in soybean seed. To obtain a soybean line lacking Gly m Bd 30K, we introduced plasmids containing the **antisense** cDNA for Gly m Bd 30K into soybean hypocotyl segments via particle bombardment. At first, we investigated the optimum condition of bombardment using GUS reporter gene. The highest transient GUS expression was observed when 1,300psi rupture disc was used, the distance between stopping screen and the soybean sample was 9cm, and 2 shots were made per petri dish. Under this condition, we introduced a plasmid (pBI Bd30KA) which contained **antisense** cDNA for Gly m Bd 30K driven by CaMV35S promoter, and kanamycin resistant marker gene into hypocotyl segment of soybean. The hypocotyl segments were cultured on the 1/2 L2 agar medium containing 2mg/L of thidiazuron(TDZ). Although many shoots regenerated from the segment, which were transferred to the selection medium containing 100mg/L kanamycin, no transgenic soybean **plant** was obtained because all the shoots died eventually through selection. (author abst.)

4/3,AB/14 (Item 4 from file: 94)

DIALOG(R)File 94:JICST-EPlus
(c)2001 Japan Science and Tech Corp(JST). All rts. res

02732614 JICST ACCESSION NUMBER: 96A0153554 FILE SEGMENT: JICST-E
Development of the technological foundation of functional food design. Molecule design of low-**allergen** rice protein based on protein engineering and molecule breeding technology.(Sponsor : Ministry of Education).
NAKAMURA RYO (1)
(1) Nagoya Univ., Sch. of Agric.
Kinosei Shokuhin no Kaiseki to Bunshi Sekkei. Heisei 6 Nendo. Dai3kai Seika Hokokusho, 1995, PAGE.81-82, FIG.1, REF.4
JOURNAL NUMBER: N19960031Y
UNIVERSAL DECIMAL CLASSIFICATION: 641.1+612.39
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication

4/3,AB/15 (Item 5 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2001 Japan Science and Tech Corp(JST). All rts. reserv.

02689125 JICST ACCESSION NUMBER: 96A0113302 FILE SEGMENT: JICST-E
Production of Hypo-allergenic Food by Gene Engineering.
NAKAMURA RYO (1)
(1) Nagoya Univ., Sch. of Agric.
Rakuno Kagaku, Shokuhin no Kenkyu(Japanese Journal of Dairy and Food Science), 1995, VOL.44,NO.6, PAGE.A.251-A.254, FIG.4, REF.14
JOURNAL NUMBER: F0966ABH ISSN NO: 0385-0218 CODEN: RKSKD
UNIVERSAL DECIMAL CLASSIFICATION: 664.6/.7 575.113.089
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Review article
MEDIA TYPE: Printed Publication

4/3,AB/16 (Item 6 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2001 Japan Science and Tech Corp(JST). All rts. reserv.

02591795 JICST ACCESSION NUMBER: 95A0524333 FILE SEGMENT: JICST-E
Environmental risk evaluation of transgenic rice expressing an **antisense** gene for an allergic protein of rice in the emvironmentally isolated field.
TADA YUICHI (1); SAMOTO SHIRO (1); SAWADA RINPEI (1); TAKAHASHI MASAAKI (1); SHIMADA HIROAKI (1); YAMADA MINORU (2); HARADA JIRO (3); MATSUMURA TAKESHI (3); ADACHI TAKAHIRO (4)
(1) Mitsui Toatsu Chem., Inc.; (2) Natl. Inst. of Agrobiol. Resour.; (3) Minist. of Agric., For. and Fish., Natl. Inst. of Agro-Environ. Sci. ; (4)Nagoya Univ., Sch. of Agric.
Breed Sci, 1995, VOL.45,bessatsu 1, PAGE.67, TBL.1
JOURNAL NUMBER: Y0311ABU ISSN NO: 0536-3683
UNIVERSAL DECIMAL CLASSIFICATION: 633.18 575.113.089 664.6/.7
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Short Communication
MEDIA TYPE: Printed Publication

4/3,AB/17 (Item 7 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2001 Japan Science and Tech Corp(JST). All rts. reserv.

02186174 JICST ACCESSION NUMBER: 94A0777692 FILE SEGMENT: JICST-E
Gene engineering for [redacted]-allergenic rice.
NAKAMURA RYO (1); MATSUDA TSUKASA (1)
(1) Nagoya Univ., Sch. of Agric.
Baiosaiensu to Indasutori(Bioscience & Industry), 1994, VOL.52,NO.9, PAGE.728-730, FIG.1, REF.14
JOURNAL NUMBER: G0089ACV ISSN NO: 0914-8981 CODEN: BIDSE
UNIVERSAL DECIMAL CLASSIFICATION: 631.527/.528 664.6/.7
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication

4/3,AB/18 (Item 8 from file: 94)
DIALOG(R)File 94:JICST-EPlus

02031009 JICST ACCESSION NUMBER: 94A0404207 FILE SEGMENT: JICST-E
Environmental risk evaluation of transgenic rice which was transformed with an **antisense** gene for an allergic protein and that with an **antisense** Waxy gene in the semi-closed greenhouse.
TADA YUICHI (1); SHIMADA HIROAKI (1); FUJIMURA TATSUHITO (1); ADACHI TAKAHIRO (2); MATSUDA TAKASHI (2); NAKAMURA RYO (2)
(1) Mitsui Toatsu Chem., Inc.; (2) Nagoya Univ., Sch. of Agric.
Breed Sci, 1994, VOL.44,bessatsu 1, PAGE.49, TBL.2
JOURNAL NUMBER: Y0311ABU ISSN NO: 0536-3683
UNIVERSAL DECIMAL CLASSIFICATION: 633.18 575.116 614.7:628:009
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Short Communication
MEDIA TYPE: Printed Publication

4/3,AB/19 (Item 9 from file: 94)
DIALOG(R)File 94:JICST-EPlus

01709980 JICST ACCESSION NUMBER: 93A0186597 FILE SEGMENT: JICST-E
Reduction of **Allergen** Contents or Amylose Contents of Rice Grain by Introduction of **Antisense** Genes.
TADA YUICHI (1); FUJIMURA TATSUHITO (1)
(1) Mitsui Toatsu Chemicals Inc.
Gekkan Soshiki Baiyo(Tissue Culture), 1993, VOL.19,NO.2, PAGE.36-39, FIG.3, TBL.1, REF.9
JOURNAL NUMBER: F0781BAM ISSN NO: 0386-1791
UNIVERSAL DECIMAL CLASSIFICATION: 631.527/.528 633.18
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Review article
MEDIA TYPE: Printed Publication

4/3,AB/20 (Item 1 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

03767394 H.W. WILSON RECORD NUMBER: BGSI98017394
Biotechnology: realizing the promise through innovation and meaningful labeling.
Bruhn, Christine M
Nutrition Today (Nutr Today) v. 33 no1 (Jan./Feb. 1998) p. 13-18
SPECIAL FEATURES: bibl il ISSN: 0029-666X
LANGUAGE: English
COUNTRY OF PUBLICATION: United States

WORD COUNT: 3587

ABSTRACT: A counterpoint to Nestle's review of biotechnology in this issue is provided. The writer contends that the information in Nestle's review is selectively presented to paint biotechnology as an intensely controversial technology that is being forced upon the public, a picture that is not accurate. The writer agrees with Nestle concerning the promise and potential of the technology but differs significantly on consumer response, merit of biotechnology applications, role of labeling, and opportunity for consumers to choose or not choose modified products.

13072361 PASCAL No.: 97-0363565
En Japonais
(Environmental risk evaluation of transgenic rice expressing an **antisense** gene for 16kDa albumin (II))
TADA Y; HARADA J; MATSUMURA T; YAMADA M; MATSUDA T; ADACHI T; NAKAMURA R; TAKAHASHI M; FUJIMURA T; SHIMADA H
Life Science Institute, Mitsui Toatsu Chemicals, Inc., Mobara 297, Japan; National Institute of Agro-environmental Science, Tsukuba 305, Japan; Society for Techno-innovation of Agriculture, Forestry and Fisheries, Minatoku 107, Japan; School of Agriculture Science, Nagoya University, Nagoya 464-01, Japan
Journal: Breeding science, 1997, 47 (1) 77-81
Language: Japanese

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? b 155, 5, agri

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     $0.00  Estimated cost this search
     $0.00  Estimated total session cost   0.272 DialUnits

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*File 155: Updates include In Process records only. Updating of
Completed records is expected to resume in January. See Help News155.
  File   5:Biosis Previews(R)  1969-2001/Dec W4
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  File   6:NTIS  1964-2001/Jan W1
         (c) 2001 NTIS, Intl Cpyrght All Rights Res
*File   6: See HELP CODES6 for a short list of the Subject Heading Codes
(SC=, SH=) used in NTIS.
  File  10:AGRICOLA  70-2001/Dec
         (c) format only 2001 The Dialog Corporation
  File  28:Oceanic Abst.  1964-2001/Nov
         (c) 2001 Cambridge Scientific Abstracts
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         (c) 2001 Inst for Sci Info
  File  44:Aquatic Sci&Fish Abs  1978-2001/Nov
         (c) 2001 FAO (for ASFA Adv Brd)
  File  50:CAB Abstracts  1972-2001/Nov
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*File  50: Truncating CC codes is recommended for full retrieval.
See Help News50 for details.
  File  65:Inside Conferences  1993-2001/Dec W3
         (c) 2001 BLDSC all rts. reserv.
*File  65: For variance in UDs please see Help News65.
  File  76:Life Sciences Collection  1982-2001/Dec
         (c) 2001 Cambridge Sci Abs
*File  76: UDs have been manually adjusted to reflect the current months
data. There is no data missing.
  File  94:JICST-EPlus  1985-2001/Nov W3
         (c)2001 Japan Science and Tech Corp(JST)
*File  94: There is no data missing. UDs have been adjusted to reflect
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  File  98:General Sci Abs/Full-Text  1984-2001/Nov
         (c) 2001 The HW Wilson Co.
  File  99:Wilson Appl. Sci & Tech Abs  1983-2001/Nov
         (c) 2001 The HW Wilson Co.
  File 117:Water Resour.Abs.  1967-2001/Nov
         (c) 2001 Cambridge Scientific Abs.
  File 143:Biol. & Agric. Index  1983-2001/Nov
         (c) 2001 The HW Wilson Co
  File 144:Pascal  1973-2001/Dec W4
         (c) 2001 INIST/CNRS
  File 203:AGRIS  1974-2001/Oct
         Dist by NAL, Intl Copr. All rights reserved
  File 266:FEDRIP  2001/Nov
         Comp & dist by NTIS, Intl Copyright All Rights Res
  File 306:Pesticide Fact File  1998/Jun
         (c) 1998 BCPC
*File 306: File has been updated & reloaded.  See HELP NEWS 306.  New
Bluesheet available in F415 & at URL http://library.dialog.com/bluesheets.
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  File 434:SciSearch(R) Cited Ref Sci  1974-1989/Dec
         (c) 1998 Inst for Sci Info

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Completed processing all files
             878  S1
        75339479  PY<2000
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? s s2 and allergen?

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          110937  ALLERGEN?
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? t s4/3,ab/all

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 4/3,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10093800   99217576   PMID: 10202926
  Oral gene delivery with chitosan--DNA nanoparticles generates immunologic
protection in a murine model of peanut allergy.
  Roy K; Mao HQ; Huang SK; Leong KW
  Department  of Biomedical Engineering, Johns Hopkins University School of
Medicine, Baltimore, Maryland 21205, USA.
  Nature medicine (UNITED STATES)   Apr 1999,  5  (4)  p387-91,
ISSN 1078-8956   Journal Code: CG5
  Contract/Grant  No.: AI34002, AI, NIAID; AI40274, AI, NIAID; CA68011, CA,
NCI
  Comment in Nat Med. 1999 Apr;5(4) 380-1
  Languages: ENGLISH
  Document type: Journal Article
  Record type: Completed
  Food  allergy  is  a  common  and  often  fatal disease with no effective
```

treatment. We describe here a new immunoprophylactic strategy using oral **allergen**-gene immunization to modulate **peanut** antigen-induced murine anaphylactic responses. Oral administration of DNA nanoparticles synthesized by complexing plasmid DNA with chitosan, a natural biocompatible polysaccharide, resulted in transduced gene expression in the intestinal epithelium. Mice receiving nanoparticles containing a dominant **peanut allergen** gene (pCMVArah2) produced secretory IgA and serum IgG2a. Compared with non-immunized mice or mice treated with 'naked' DNA, mice immunized with nanoparticles showed a substantial reduction in **allergen** -induced anaphylaxis associated with reduced levels of IgE, plasma histamine and vascular leakage. These results demonstrate that oral **allergen** -gene immunization with chitosan-DNA nanoparticles is effective in modulating murine anaphylactic responses, and indicate its prophylactic utility in treating food allergy.

4/3,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09691626 98138846 PMID: 9537777
CD4+ cells proliferate after **peanut**-extract-specific and CD8+ cells proliferate after polyclonal stimulation of PBMC of children with atopic dermatitis.
Laan MP; Tibbe GJ; Oranje AP; Bosmans EP; Neijens HJ; Savelkoul HF
Department of Immunology, Erasmus University Rotterdam, The Netherlands.
Clinical and experimental allergy (ENGLAND) Jan **1998**, 28 (1) p35-44, ISSN 0954-7894 Journal Code: CEB
Comment in Clin Exp Allergy. 1998 Jan;28(1) 7-9
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: Few studies describe in vitro food-**allergen** induced proliferative responses and cytokine production of PBMC of children with atopic dermatitis. This is especially true for **peanut-allergen**. OBJECTIVES: To analyse the specificity of the T cell in proliferative responses, in children with atopic dermatitis with or without **peanut** allergy and healthy age-matched children. METHODS: Proliferative responses were measured by [3H]-thymidine incorporation and by expression of the intracellular Ki67-antigen using flow cytometry after antigen-specific stimulation of PBMC with **peanut** -extract (day 7) or polyclonal stimulation with Phorbol-12myristate-13acetate and Ca-ionophore (day 3). Cytokine mRNA (Interferon-gamma (IFNgamma), IL-4) was detected by semiquantitative RT-PCR. Cytokine production (IL-4, IFNgamma) was measured by ELISA. RESULTS: **Peanut**-extract induced proliferative responses of PBMC from children with atopic dermatitis and **peanut** allergy (AD+PA+) were significantly higher as compared with the other groups studied. Ki67-antigen double staining revealed that 80-100% of the proliferating cells were CD4+. These proliferative responses correlated significantly with the increase in IL-4 mRNA expression after **peanut**-extract specific stimulation. After polyclonal stimulation, however, CD8+ cells preferentially proliferated. The degree of proliferation after polyclonal stimulation correlated inversely with the ratio of IL-4/IFNgamma production. CONCLUSIONS: The principal responding population of T cells in proliferative responses is different after **peanut**-extract specific and polyclonal stimulation of PBMC from AD+PA+ patients. Furthermore, we found indirect evidence that the PBMC fraction of AD+PA+ children contains increased frequencies of **peanut**-specific T helper-2 cells.

4/3,AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08961599 96316921 PMID: 8765820
Food **allergen** (**peanut**)-specific TH2 clones generated from the peripheral blood of a patient with **peanut** allergy.

de Jong EC; Spanhaak S; Martens BP; Kapsenberg ML; Penninks AH; Wierenga EA

Netherlands Organization for Applied Scientific Research, Nutrition and Food Research Institute, Zeist.

Journal of allergy and clinical immunology (UNITED STATES) Jul **1996**, 98 (1) p73-81, ISSN 0091-6749 Journal Code: H53

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

BACKGROUND: Increasing evidence indicates a prominent role of **allergen** -specific TH2 cells, with high IL-4 and IL-5 production and low interferon-gamma production, in the regulation of IgE and eosinophil production in allergic disorders. However, most studies have concentrated on T cells reactive with inhalation **allergens**, whereas little is known about the properties of food **allergen** -reactive T cells. OBJECTIVES: In this study we therefore characterized **peanut**-specific T cells, cloned from a patient with severe **peanut** allergy. METHODS: Peripheral blood mononuclear cells from patients with **peanut** allergy and nonallergic individuals were stimulated with crude **peanut** extract (CPE) to compare the proliferative responses and to select a suitable patient for the cloning of CPE-specific T cells. The resultant panel of CPE-reactive T-lymphocyte clones was serologically phenotyped by flow cytometry and analyzed for cytokine secretion by ELISA. RESULTS: The patients' peripheral blood mononuclear cells showed a dose-dependent proliferation response to CPE, which was significantly higher ($p < 0.05$) than in peripheral blood mononuclear cells of nonallergic donors. The CPE-specific T-lymphocyte clones generated from the selected patient were all CD4+/CD8- T helper cells with a TH2 cytokine profile, secreting high amounts of IL-4 and IL-5, but little or no interferon-gamma. CONCLUSIONS: This study demonstrates that **peanut**-specific T cells do occur in the peripheral blood of patients with **peanut** allergy and suggests an increased frequency of these T cells in patients compared with nonallergic control subjects. The CD4+ phenotype and the TH2 cytokine profile of the CPE-specific T-lymphocyte clones suggest a functional role of **allergen** -specific TH2 cells in the pathophysiology of food allergy, similar to the function of inhalation **allergen**-specific TH2 cells.

4/3,AB/4 (Item 1 from file: 203)
DIALOG(R)File 203:AGRIS

02330114 AGRIS No: 1999-065087

Isolation and characterization of proteic **allergens** in refined **peanut** oil

Olszewski, A.; Pons, L.; Moutete, F.; Aimone-Gastin, I.; Kanny, G.; Moneret-Vautrin, D.A.; Gueant, J.L. (Laboratory of Cellular and Molecular Biology in Nutrition, Faculty of Medicine, University H. Poincare of Nancy, Vandoeuvre-les-Nancy (France))

Journal: Clinical and Experimental Allergy, 1998, v. 28(7) p. 850-859

Language: English

4/3,AB/5 (Item 2 from file: 203)
DIALOG(R)File 203:AGRIS

02157031 AGRIS No: 97-113198

Randomised, double blind, crossover challenge study of **allergenicity** of **peanut** oils in subjects allergic to peanuts

O'B Hourihane, J.; Bedwani, S.J.; Dean, T.P.; Warner, J.O. (University Department of Child Health, Mailpoint 803, Southampton General Hospital, Southampton SO16 6YD (United Kingdom))

Journal: British Medical Journal (Clinical Research edition), 1997, v. 314(7087) p. 1084-1088

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? s peanut and ara

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           21453  ARA
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? s s6 and py<2000

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Completed processing all files
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 8/3,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10328833   99143135   PMID: 9988715
    Heat-induced  conformational  changes  of  Ara  h  1,  a  major
peanut allergen, do not affect its allergenic properties.
  Koppelman SJ; Bruijnzeel-Koomen CA; Hessing M; de Jongh HH
  TNO  Nutrition  and  Food  Research  Institute,  3700  AJ  Zeist,  The
Netherlands. koppelman@voeding.tno.nl
  Journal of biological chemistry (UNITED STATES)   Feb 19 1999,  274
  (8)  p4770-7,  ISSN 0021-9258   Journal Code: HIV
  Languages: ENGLISH
  Document type: Journal Article
  Record type: Completed
  Ara  h  1,  a  major  peanut  allergen  was  isolated,  and  its
structure  on  secondary,  tertiary,  and  quaternary  level  at  ambient
temperature  was  investigated  using  spectroscopic  and  biochemical
techniques.  Ara  h 1 appeared to be a highly structured protein on a
secondary  level,  possesses  a  clear  tertiary  fold,  and  is  present as a
trimeric  complex.  Heat  treatment  of  purified  Ara  h 1 results in an
endothermic,  irreversible  transition  between  80  and  90  degreesC,  leading to
an  increase  in  beta-structures  and  a  concomitant  aggregation  of  the
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protein. **Ara** h 1 from peanuts that were heat-treated prior to the purification proced[redacted] exhibited a similar denat[redacted]d state with an increased secondary folding and a decreased solubility. The effect of heat treatment on the in vitro allergenic properties of **Ara** h 1 was investigated by means of a fluid-phase IgE binding assay using serum from patients with a clinically proven **peanut** allergy. **Ara** h 1 purified from peanuts heated at different temperatures exhibited IgE binding properties similar to those found for native **Ara** h 1, indicating that the allergenicity of **Ara** h 1 is heat-stable. We conclude that the allergenicity of **Ara** h 1 is unaffected by heating, although native **Ara** h 1 undergoes a significant heat-induced denaturation on a molecular level, indicating that the recognition of conformational epitopes of **Ara** h 1 by IgE either is not a dominant mechanism or is restricted to parts of the protein that are not sensitive to heat denaturation.

8/3,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10284629 99406463 PMID: 10474031
Selective cloning of **peanut** allergens, including profilin and 2S albumins, by phage display technology.
Kleber-Janke T; Crameri R; Appenzeller U; Schlaak M; Becker WM
Research Center Borstel, Germany. tkleber@fz-borstel.de
International archives of allergy and immunology (SWITZERLAND) Aug **1999**, 119 (4) p265-74, ISSN 1018-2438 Journal Code: BJ7
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: **Peanut** kernels contain many allergens able to elicit IgE-mediated type 1 allergic reactions in sensitized individuals. Sera from sensitized patients recognize variable patterns of IgE-binding proteins. The identification of the IgE-binding proteins of **peanut** extract would faciliate improvement of diagnostic and immunotherapeutic approaches as well as development of sensitive test systems for the detection of hidden **peanut** allergens present as additives in various industrial food products and the investigation of their stability during processing of food products. METHODS: We applied the pJuFo cloning system based on the phage surface display of functional cDNA expression products to clone cDNAs encoding **peanut** allergens. Sera (n = 40) of **peanut**-allergic individuals were selected according to case history, radioallergosorbent test and immunoblot analysis to demonstrate IgE binding towards the newly identified recombinant allergens. RESULTS: In addition to the known allergens **Ara** h 1 and **Ara** h 2 we were able to identify four allergens with estimated molecular weights of 36, 16, 14.5 and 14 kDa. Three of them formally termed **Ara** h 4, **Ara** h6 and **Ara** h 7 show significant sequence similarities to the family of seed storage proteins and the fourth (**Ara** h 5) corresponds to the well-known plant allergen profilin. Immunoblotting of the six expressed recombinant allergens with 40 patients sera shows 14 individual recognition patterns and the following frequency of specific IgE binding: **Ara** h 1 was recognized by 65%, **Ara** h 2 by 85%, **Ara** h 4 by 53%, **Ara** h 5 by 13%, **Ara** h 6 by 38% and **Ara** h 7 by 43% of the selected sera. CONCLUSIONS: All of the selected **peanut**-positive sera can detect at least one of the six identified recombinant allergens which can be used to establish individual patients' reactivity profiles. A comparison of these profiles with the clinical data will possibly allow a further insight into the relationship between clinical severity of the symptoms and specific IgE levels towards the six **peanut** allergens.

8/3,AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10222974 99041700 PMID: 9824392
Serological characteristics of **peanut** allergy.
Clarke MC; Kilburn SA; Hourihane JO; Dean KR; Warner JO; Dean TP
University Child Health, Southampton General Hospital, Southampton, UK.
Clinical and experimental allergy (ENGLAND) Oct **1998**, 28 (10) p1251-7, ISSN 0954-7894 Journal Code: CEB
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: **Peanut** is the most common cause of severe or fatal food-associated anaphylaxis. Studies indicate that **peanut** extracts contain many allergenic proteins. The identification of major and minor allergenic components is necessary for standardization of experimental and diagnostic extracts. OBJECTIVE: To identify further major and minor allergenic components of **peanut** extract using a large population of **peanut** allergics, and to relate serological findings to clinical parameters. METHODS: The crude **peanut** extract was fractionated by fast protein liquid chromatography and the IgE binding proteins identified by sodium dodecyl sulphate polyacrylamide gel electrophoresis followed by western blotting. Serum from 89 **peanut** allergics with a positive history of **peanut** allergy and elevated specific IgE and control serum from four atopic and four non-atopic, non-**peanut** allergics were used. RESULTS: Nineteen **peanut** proteins were found to bind IgE from **peanut** allergic sera. Over 70% of subjects reacted to protein bands of 63 and 17 kDa (consistent with **Ara** h 1 and **Ara** h 2, respectively), confirming the importance of these two proteins as major allergens. A high proportion of patient sera also bound proteins at 15, 10, 30, 18 and 51 kDa in decreasing order. The percentage of cases with sensitivity to a 15 kDa protein was found to be higher in patient groups with severe reactions to **peanut**. CONCLUSION: This study highlights the diversity of **peanut** allergens. Diagnostic extracts containing a high proportion of the 15 kDa component may aid in diagnosis.

8/3,AB/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10093800 99217576 PMID: 10202926
Oral gene delivery with chitosan--DNA nanoparticles generates immunologic protection in a murine model of **peanut** allergy.
Roy K; Mao HQ; Huang SK; Leong KW
Department of Biomedical Engineering, Johns Hopkins University School of Medicine, Baltimore, Maryland 21205, USA.
Nature medicine (UNITED STATES) Apr **1999**, 5 (4) p387-91, ISSN 1078-8956 Journal Code: CG5
Contract/Grant No.: AI34002, AI, NIAID; AI40274, AI, NIAID; CA68011, CA, NCI
Comment in Nat Med. 1999 Apr;5(4) 380-1
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Food allergy is a common and often fatal disease with no effective treatment. We describe here a new immunoprophylactic strategy using oral allergen-gene immunization to modulate **peanut** antigen-induced murine anaphylactic responses. Oral administration of DNA nanoparticles synthesized by complexing plasmid DNA with chitosan, a natural biocompatible polysaccharide, resulted in transduced gene expression in the intestinal epithelium. Mice receiving nanoparticles containing a dominant **peanut** allergen gene (pCMVArah2) produced secretory IgA and serum IgG2a. Compared with non-immunized mice or mice treated with 'naked' DNA, mice immunized with nanoparticles showed a substantial reduction in allergen-induced anaphylaxis associated with reduced levels of IgE, plasma histamine and vascular leakage. These results demonstrate that oral allergen-gene immunization with chitosan-DNA nanoparticles is effective in modulating murine anaphylactic responses, and indicate its prophylactic

utility in treating food allergy.

8/3,AB/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10078938 99172246 PMID: 10072557
Strain-dependent induction of allergic sensitization caused by **peanut** allergen DNA immunization in mice.
Li X; Huang CK; Schofield BH; Burks AW; Bannon GA; Kim KH; Huang SK; Sampson HA
Department of Pediatrics, Mount Sinai School of Medicine, New York, NY 10029, USA. Xiu-min li@smtplink.mssm.edu
Journal of immunology (UNITED STATES) Mar 1 **1999**, 162 (5) p3045-52, ISSN 0022-1767 Journal Code: IFB
Contract/Grant No.: AI43668, AI, NIAID; ES03819, ES, NIEHS
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
To investigate the potential application of allergen gene immunization in the modulation of food allergy, C3H/HeSn (C3H) mice received i.m. injections of pAra h2 plasmid DNA encoding one of the major **peanut** allergens, **Ara** h2. Three weeks following pDNA immunization, serum **Ara** h2-specific IgG2a, IgG1, but not IgE, were increased significantly in a dose-dependent manner. IgG1 was 30-fold higher in multiply compared with singly immunized mice. **Ara** h2 or **peanut** protein injection of immunized mice induced anaphylactic reactions, which were more severe in multiply immunized mice. Heat-inactivated immune serum induced passive cutaneous anaphylaxis, suggesting that anaphylaxis in C3H mice was mediated by IgG1. IgG1 responses were also induced by intradermal injection of pAra h2, and by i.m. injection of pOMC, the plasmid DNA encoding the major egg allergen protein, ovomucoid. To elucidate whether the pDNA immunization-induced anaphylaxis was a strain-dependent phenomenon, AKR/J and BALB/c mice also received multiple i.m. pAra h2 immunizations. Injection of **peanut** protein into these strains at weeks 3 or 5 following immunization did not induce reactions. Although IgG2a was increased significantly from week 2 in AKR/J mice and from week 4 in BALB/c mice and remained elevated for at least 6 wk, no IgG1 or IgE was detected. These results indicate that the type of immune responses to pDNA immunization in mice is strain dependent. Consequently, models for studying human allergen gene immunization require careful selection of suitable strains. In addition, this suggests that similar interindividual variation is likely in humans.

8/3,AB/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10078524 99146968 PMID: 10021462
Molecular cloning and epitope analysis of the **peanut** allergen **Ara** h 3.
Rabjohn P; Helm EM; Stanley JS; West CM; Sampson HA; Burks AW; Bannon GA
Department of Biochemistry and Molecular Biology, University of Arkansas for Medical Sciences, Arkansas Children's Hospital Research Institute, Little Rock 72205, USA.
Journal of clinical investigation (UNITED STATES) Feb **1999**, 103 (4) p535-42, ISSN 0021-9738 Journal Code: HS7
Contract/Grant No.: RO1-AI33596, AI, NIAID
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Peanut allergy is a significant IgE-mediated health problem because of the increased prevalence, potential severity, and chronicity of the reaction. Following our characterization of the two **peanut** allergens **Ara** h 1 and **Ara** h 2, we have isolated a cDNA clone encoding a

third **peanut** allergen, **Ara** h 3. The deduced amino acid sequence of **Ara** h 3 shows homology to 11S seed-storage proteins. The recombinant form of this protein was expressed in a bacterial system and was recognized by serum IgE from approximately 45% of our **peanut** -allergic patient population. Serum IgE from these patients and overlapping, synthetic peptides were used to map the linear, IgE-binding epitopes of **Ara** h 3. Four epitopes, between 10 and 15 amino acids in length, were found within the primary sequence, with no obvious sequence motif shared by the peptides. One epitope is recognized by all **Ara** h 3-allergic patients. Mutational analysis of the epitopes revealed that single amino acid changes within these peptides could lead to a reduction or loss of IgE binding. By determining which amino acids are critical for IgE binding, it might be possible to alter the **Ara** h 3 cDNA to encode a protein with a reduced IgE-binding capacity. These results will enable the design of improved diagnostic and therapeutic approaches for food-hypersensitivity reactions.

8/3,AB/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09855092 98339794 PMID: 9677140
Identification and partial characterization of multiple major allergens in **peanut** proteins.
de Jong EC; Van Zijverden M; Spanhaak S; Koppelman SJ; Pellegrom H; Penninks AH
TNO Nutrition and Food Research Institute, Immunotoxicology group, Zeist, The Netherlands.
Clinical and experimental allergy (ENGLAND) Jun **1998**, 28 (6) p743-51, ISSN 0954-7894 Journal Code: CEB
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: Peanuts are a major cause of food allergies both in children as in adults which can induce an anaphylactic shock. The identification and characterization of **peanut** allergens could lead to more insight into the mechanism and contribute to the improvement of diagnostic tests and treatment for **peanut** allergy. OBJECTIVE: In the present study, the **peanut** protein-specific immunoglobulin concentrations as well as their recognition of the various **peanut** proteins or protein subunits was determined in the plasma of **peanut**-allergic (PA) and non-allergic (NA) individuals. Moreover, two **peanut** allergens were characterized in more detail to confirm them as the earlier described **Ara** h1 and **Ara** h2. METHODS: The presence of Ig-binding sites in **peanut** proteins was studied by immunoblotting assays whereas the concentrations of **peanut**-specific Ig was determined by ELISA. RESULTS: **Peanut** proteins were found to contain multiple binding sites for immunoglobulins. Of these proteins, six were recognized by **peanut**-specific IgE present in more than 50% of the plasma samples of the PA group. Their molecular weights were approximately 44, 40, 33, 21, 20 and 18 kDa. The last three protein bands were recognized by **peanut**-specific IgE present in more than 70% of the PA plasma samples and were thought to contain **Ara** h2. This allergen as well as another protein that was thought to be **Ara** h1, which was not recognized by the majority of the patients' IgE-containing plasma samples, were isolated and the N terminal amino acid sequence was determined. **Peanut** protein-specific IgA, IgM, IgG and IgG-subclasses showed a more diverse recognition pattern of **peanut** protein in the PA group compared to the NA group. No differences were found in the plasma concentrations of **peanut** protein-specific immunoglobulins of the various classes between the PA and NA group. CONCLUSIONS: From the present study, we conclude that peanuts contain multiple allergens, of which six can be described as major allergens, **Ara** h2 included. In our population **Ara** h1 is not a major allergen. The recognition of **peanut** proteins by immunoglobulins is more diverse in PA individuals compared with NA individuals which, however,

is not substantiated in the concentrations of **peanut** -specific immunoglobulins in plasma, other than IgE.

8/3,AB/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09775521 98256301 PMID: 9593717
Biochemical and structural analysis of the IgE binding sites on **ara** h1, an abundant and highly allergenic **peanut** protein.
Shin DS; Compadre CM; Maleki SJ; Kopper RA; Sampson H; Huang SK; Burks AW ; Bannon GA
Department of Biochemistry & Molecular Biology, University of Arkansas for Medical Sciences, Arkansas Children's Hospital, Little Rock, Arkansas 72205, USA.
Journal of biological chemistry (UNITED STATES) May 29 **1998**, 273 (22) p13753-9, ISSN 0021-9258 Journal Code: HIV
Contract/Grant No.: RO1-A33596, PHS
Languages: ENGLISH
Document type: Clinical Trial; Controlled Clinical Trial; Journal Article
Record type: Completed
Allergy to **peanut** is a significant IgE-mediated health problem because of the high prevalence, potential severity, and chronicity of the reaction. **Ara** h1, an abundant **peanut** protein, is recognized by serum IgE from >90% of **peanut**-sensitive individuals. It has been shown to belong to the vicilin family of seed storage proteins and to contain 23 linear IgE binding epitopes. In this communication, we have determined the critical amino acids within each of the IgE binding epitopes of **Ara** h1 that are important for immunoglobulin binding. Surprisingly, substitution of a single amino acid within each of the epitopes led to loss of IgE binding. In addition, hydrophobic residues appeared to be most critical for IgE binding. The position of each of the IgE binding epitopes on a homology-based molecular model of **Ara** h1 showed that they were clustered into two main regions, despite their more even distribution in the primary sequence. Finally, we have shown that **Ara** h1 forms a stable trimer by the use of a reproducible fluorescence assay. This information will be important in studies designed to reduce the risk of **peanut**-induced anaphylaxis by lowering the IgE binding capacity of the allergen.

8/3,AB/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09590915 97458000 PMID: 9314344
Poor biologic activity of cross-reactive IgE directed to carbohydrate determinants of glycoproteins.
van der Veen MJ; van Ree R; Aalberse RC; Akkerdaas J; Koppelman SJ; Jansen HM; van der Zee JS
Department of Pulmonology, Academic Medical Center, University of Amsterdam, The Netherlands.
Journal of allergy and clinical immunology (UNITED STATES) Sep **1997**, 100 (3) p327-34, ISSN 0091-6749 Journal Code: H53
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: In our outpatient population, approximately one third of patients sensitized to grass pollen were found to have significant serum levels of anti-**peanut** IgE in the RAST, without positive **peanut** skin prick test (SPT) response and without **peanut**-related allergic symptoms. It was suggested earlier that poor biologic activity of IgE antibodies directed to cross-reactive carbohydrate determinants (CCD) of glycoproteins might explain these discrepancies. OBJECTIVE: In this study we investigated the biologic activity of IgE directed to CCD. METHODS: Sera of 32 patients allergic to grass pollen with significant levels of anti-

peanut IgE, a negative response on **peanut** SPT, and no symptoms of **peanut** allergy were tested for the presence of anti-CCD IgE. Eleven of these patients with greater than 3.0 IU/ml anti-**peanut** IgE (patients 1 to 11) were selected together with four control patients allergic to **peanut**, on the basis of a positive response on **peanut** SPT and a history of **peanut** allergy (patients 12 to 15). Inhibition of the **peanut** RAST was performed by using proteinase K-treated grass pollen extract as a CCD source. Basophil histamine release assays (BHRAs) were performed with **peanut** extract and the isolated **peanut** major allergens **Ara** h 1 and **Ara** h 2. In addition, intracutaneous tests with **peanut** extract were performed. RESULTS: In 29 (91%) of 32 patients with discrepant **peanut** RAST and SPT responses, anti-CCD IgE (> or =0.1 IU/ml) was detected. In patients 1 to 11 almost complete inhibition of the **peanut** RAST with CCD was found (94.3% +/- 5.5%; mean +/- SD). In contrast, in the patients allergic to **peanut** only partial inhibition (59%) was found in one subject (p = 0.002, Mann-Whitney test). In the BHRAs and the intracutaneous tests of patients with discrepant **peanut** RAST and SPT results, reactivity was found only at high concentrations of **peanut** allergens. When related to specific IgE levels, reactivity to **peanut** allergens in the BHRAs of these patients was found to be at least a factor of 1000 less when compared with reactivity to control inhalant allergens. CONCLUSION: We conclude that cross-reactive IgE directed to carbohydrate determinants of glycoproteins, as found in grass pollen-sensitized patients, has poor biologic activity. It can therefore cause positive RAST results without apparent clinical significance.

8/3,AB/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09348737 97330026 PMID: 9186485

Identification and mutational analysis of the immunodominant IgE binding epitopes of the major **peanut** allergen **Ara** h 2.

Stanley JS; King N; Burks AW; Huang SK; Sampson H; Cockrell G; Helm RM; West CM; Bannon GA

Department of Biochemistry & Molecular Biology, University of Arkansas for Medical Sciences, Arkansas Children's Hospital Research Institute, Little Rock 72205, USA.

Archives of biochemistry and biophysics (UNITED STATES) Jun 15 **1997**, 342 (2) p244-53, ISSN 0003-9861 Journal Code: 6SK

Contract/Grant No.: RO1-AI33596, AI, NIAID

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

A major **peanut** allergen, **Ara** h 2, is recognized by serum IgE from > 90% of patients with **peanut** hypersensitivity. Biochemical characterization of this allergen indicates that it is a glycoprotein of approximately 17.5 kDa. Using N-terminal amino acid sequence data from purified **Ara** h 2, oligonucleotide primers were synthesized and used to identify a clone (741 bp) from a **peanut** cDNA library. This clone was capable of encoding a 17.5-kDa protein with homology to the conglutin family of seed storage proteins. The major linear immunoglobulin E (IgE)-binding epitopes of this allergen were mapped using overlapping peptides synthesized on an activated cellulose membrane and pooled serum IgE from 15 **peanut**-sensitive patients. Ten IgE-binding epitopes were identified, distributed throughout the length of the **Ara** h 2 protein. Sixty-three percent of the amino acids represented in the epitopes were either polar uncharged or apolar residues. In an effort to determine which, if any, of the 10 epitopes were recognized by the majority of patients with **peanut** hypersensitivity, each set of 10 peptides was probed individually with serum IgE from 10 different patients. All of the patient sera tested recognized multiple epitopes. Three epitopes (aa27-36, aa57-66, and aa65-74) were recognized by all patients tested. In addition, these three peptides bound more IgE than all the other epitopes combined,

indicating that they are the immunodominant epitopes of the **Ara** h 2 protein. Mutational analysis of the **Ara** h 2 epitopes indicate that single amino acid changes result in loss of IgE binding. Two epitopes in region aa57-74 contained the amino acid sequence DPYSP that appears to be necessary for IgE binding. These results may allow for the design of improved diagnostic and therapeutic approaches to **peanut** hypersensitivity.

8/3,AB/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09343968 97296397 PMID: 9151961
Mapping and mutational analysis of the IgE-binding epitopes on **Ara** h 1, a legume vicilin protein and a major allergen in **peanut** hypersensitivity.
Burks AW; Shin D; Cockrell G; Stanley JS; Helm RM; Bannon GA
Department of Pediatrics, University of Arkansas for Medical Sciences, Arkansas Children's Hospital Research Institute, Little Rock 72205, USA.
European journal of biochemistry (GERMANY) Apr 15 **1997**, 245 (2) p334-9, ISSN 0014-2956 Journal Code: EMZ
Contract/Grant No.: AI33596, AI, NIAID
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Peanut allergy is a significant health problem because of the prevelance and potential severity of the allergic reaction. Serum IgE from patients with documented **peanut** hypersensitivity reactions and overlapping peptides were used to identify the IgE-binding epitopes on the major **peanut** allergen, **Ara** h 1. At least twenty-three different linear IgE-binding epitopes, located throughout the length of the **Ara** h 1 protein, were identified. All of the epitopes were 6-10 amino acids in length, but there was no obvious sequence motif shared by all peptides. Four of the peptides appeared to be immunodominant IgE-binding epitopes in that they were recognized by serum from more than 80% of the patients tested and bound more IgE than any of the other **Ara** h 1 epitopes. Mutational analysis of the immunodominant epitopes revealed that single amino acid changes within these peptides had dramatic effects on IgE-binding characteristics. The identification and determination of the IgE-binding capabilities of core amino acids in epitopes on the **Ara** h 1 protein will make it possible to address the pathophysiologic and immunologic mechanisms regarding **peanut** hypersensitivity reactions specifically and food hypersensitivity in general.

8/3,AB/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09296978 97276805 PMID: 9130498
Characterization of **Ara** h 1 by two-dimensional electrophoresis immunoblot and recombinant techniques: new digestion experiments with peanuts imitating the gastrointestinal tract.
Becker WM
Forschungszentrum Borstel, Germany.
International archives of allergy and immunology (SWITZERLAND) May-Jul **1997**, 113 (1-3) p118-21, ISSN 1018-2438 Journal Code: BJ7
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Peanut allergy belongs to the food allergies which are not associated with aeroallergens. It permanently affects children as well as adults. Peanuts can cause IgE-mediated life-threatening hypersensitivity reactions of the immediate type. The identification and characterization of **peanut** allergens are preconditions for answering the question how the allergens, which interact with the gastrointestinal tract, are presented to

the immune system. This would be an important contribution to the clarification of the [redacted]homechanism of food allergy. T[redacted]identification and characterization of **peanut** allergens are performed by electrophoresis/immunoblot techniques with patient IgE, monoclonal antibodies and the lectin ConA. **Ara** h 1 is identified by N-terminal sequencing of the whole molecule and LysC cleavage products. **Ara** h 1 is a ConA-reactive 66-kD glycoprotein which consists of a variety of isoallergens and isoforms. **Peanut** experiments mimicking digestion in the gastrointestinal tract clearly demonstrate the releasability of **peanut** allergens in the mouth and the resistance of **Ara** h 1 to degradation under treatment with artificial gastric fluid.

8/3,AB/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09206514 97249357 PMID: 9095243
Peanut hypersensitivity. IgE binding characteristics of a recombinant **Ara** h I protein.
Stanley JS; Helm RM; Cockrell G; Burks AW; Bannon GA
Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock 72205, USA.
Advances in experimental medicine and biology (UNITED STATES) **1996**, 409 p213-6, ISSN 0065-2598 Journal Code: 2LU
Languages: ENGLISH
Document type: Journal Article; Review; Review, Tutorial
Record type: Completed

8/3,AB/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09126737 96408143 PMID: 8813188
Reinvestigation of the major **peanut** allergen **Ara** h 1 on molecular level.
Buschmann L; Petersen A; Schlaak M; Becker WM
Division of Allergology, Research Institute Borstel, Germany.
Monographs in allergy (SWITZERLAND) **1996**, 32 p92-8, ISSN 0077-0760 Journal Code: NHB
Languages: ENGLISH
Document type: Journal Article
Record type: Completed

8/3,AB/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08624142 96013631 PMID: 7560062
Recombinant **peanut** allergen **Ara** h I expression and IgE binding in patients with **peanut** hypersensitivity.
Burks AW; Cockrell G; Stanley JS; Helm RM; Bannon GA
Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock 72205, USA.
Journal of clinical investigation (UNITED STATES) Oct **1995**, 96 (4) p1715-21, ISSN 0021-9738 Journal Code: HS7
Contract/Grant No.: R29AI26695-05, AI, NIAID
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Peanut allergy is a significant health problem because of the frequency, the potential severity, and the chronicity of the allergic sensitivity. Serum IgE from patients with documented **peanut** hypersensitivity reactions and a **peanut** cDNA expression library were used to identify clones that encode **peanut** allergens. One of the major **peanut** allergens, **Ara** h I, was selected from these clones

using **Ara** h I specific oligonucleotides and polymerase chain reaction technology. The **Ara** h I clone identified a 2.3-kb mRNA species on a Northern blot containing **peanut** poly (A)+ RNA. DNA sequence analysis of the cloned inserts revealed that the **Ara** h I allergen has significant homology with the vicilin seed storage protein family found in most higher plants. The isolation of the **Ara** h I clones allowed the synthesis of this protein in E. coli cells and subsequent recognition of this recombinant protein in immunoblot analysis using serum IgE from patients with **peanut** hypersensitivity. With the production of the recombinant **peanut** protein it will now be possible to address the pathophysiologic and immunologic mechanisms regarding **peanut** hypersensitivity reactions specifically and food hypersensitivity in general

8/3,AB/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08584347 95155712 PMID: 7531731
Epitope specificity of the major **peanut** allergen, **Ara** h II.
Burks AW; Cockrell G; Connaughton C; Karpas A; Helm RM
Department of Pediatrics, University of Arkansas for Medical Sciences, Arkansas Children's Hospital, Little Rock 72202.
Journal of allergy and clinical immunology (UNITED STATES) Feb **1995**, 95 (2) p607-11, ISSN 0091-6749 Journal Code: H53
Contract/Grant No.: R29AI26629-04, AI, NIAID
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
The antigenic and allergenic structure of **Ara** h II, a major allergen of peanuts, was investigated with the use of four monoclonal antibodies obtained from BALB/c mice immunized with purified **Ara** h II. Our previous studies with monoclonal antibodies generated to **peanut** allergens showed this method to be useful for epitope mapping. When used as a solid phase in an ELISA, these monoclonal antibodies captured **peanut** antigen, which bound human IgE from patients with positive **peanut** challenge responses. The **Ara** h II monoclonal antibodies were found to be specific for **peanut** antigens when binding for other legumes was examined. In ELISA inhibition studies with the monoclonal antibodies, we identified two different antigenic sites on **Ara** h II. In similar studies with pooled human IgE serum from patients with positive challenge responses to peanuts, we identified two closely related IgE-binding epitopes. These characterized monoclonal antibodies to **Ara** h II will be useful for future studies to immunoaffinity purify the **Ara** h II allergen and to use in conjunction with recombinant technology for determining structure-function relationships.

8/3,AB/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08558156 95337745 PMID: 7613142
Isolation, identification, and characterization of clones encoding antigens responsible for **peanut** hypersensitivity.
Burks AW; Cockrell G; Stanley JS; Helm RM; Bannon GA
Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, USA.
International archives of allergy and immunology (SWITZERLAND) May-Jun **1995**, 107 (1-3) p248-50, ISSN 1018-2438 Journal Code: BJ7
Languages: ENGLISH
Document type: Journal Article; Review; Review, Tutorial
Record type: Completed
Peanut allergy is a significant health problem because of the frequency, the potential severity, and the chronicity of the allergic

sensitivity. Serum IgE from patients with documented **peanut** hypersensitivity reactions and a **peanut** cDNA expression library were used to identify clones that encode **peanut** allergens. One of the major **peanut** allergens, **Ara** h I, was selected from these clones using **Ara** h I-specific oligonucleotides and polymerase chain reaction technology. The **Ara** h I clone identified a 2.3-kb mRNA species on a Northern blot containing **peanut** poly A+RNA. DNA sequence analysis of the cloned inserts revealed that the **Ara** h I allergen has significant homology with the vicilin seed storage protein family found in most higher plants. The isolation of the **Ara** h I clones allowed the synthesis of this protein in Escherichia coli cells and subsequent recognition of this recombinant protein in immunoblot analysis using serum IgE from patients with **peanut** hypersensitivity. With the production of the recombinant **peanut** protein it will now be possible to address the pathophysiologic and immunologic mechanisms regarding **peanut** hypersensitivity reactions specifically and food hypersensitivity in general.

8/3,AB/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08496832 95238793 PMID: 7722164
Comparison of commercial **peanut** skin test extracts.
Hefle SL; Helm RM; Burks AW; Bush RK
Department of Medicine, University of Wisconsin, Madison, USA.
Journal of allergy and clinical immunology (UNITED STATES) Apr **1995**, 95 (4) p837-42, ISSN 0091-6749 Journal Code: H53
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
BACKGROUND: Skin prick testing is a major tool for diagnosing food allergy. Food allergen extracts have not been standardized; this may lead to great variability in the predictive accuracy of skin prick tests. METHODS: Six commercial **peanut** skin test extracts were compared in vitro with RAST inhibition assays, ELISA, and sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) followed by immunoblotting with sera from **peanut**-allergic adults and in vivo by skin prick testing. RESULTS: ELISA showed that the content of **peanut** allergens **Ara** h I and **Ara** h II in the extracts ranged from 0.0015 to 0.0236 and 0.0001 to 0.0164 mg Eq/ml, respectively. RAST inhibition studies showed that the extracts produced curves of similar slope, suggesting conservation of allergenic epitopes. SDS-PAGE revealed differences in protein profiles because roasted extracts generally possessed the same number and proportion of major protein bands but raw extracts varied more in both respects. SDS-PAGE and immunoblotting showed that two of the extracts contained major IgE-binding protein bands that did not appear in the others. One roasted extract gave little protein banding and consequently little IgE binding. CONCLUSIONS: Skin testing results showed no differences in the ability of the extracts to provoke a positive skin test response in **peanut**-sensitive subjects.

8/3,AB/19 (Item 19 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08398413 94216650 PMID: 7513004
Epitope specificity and immunoaffinity purification of the major **peanut** allergen, **Ara** h I.
Burks AW; Cockrell G; Connaughton C; Helm RM
Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock.
Journal of allergy and clinical immunology (UNITED STATES) Apr **1994**, 93 (4) p743-50, ISSN 0091-6749 Journal Code: H53
Contract/Grant No.: R29AI26629-03, AI, NIAID

Languages: ENGLISH
Document type: Journal Article
Record type: Completed

The antigenic and allergenic structure of **Ara** h I, a major allergen of peanuts, was investigated with the use of seven monoclonal antibodies obtained from BALB/c mice immunized with purified **Ara** h I. Previous work with monoclonal antibodies produced to allergens has primarily been done with inhalant allergens. Only recently have the major allergens of various foods been determined so that investigations with monoclonal antibodies into the allergenic epitopes could begin. When used as a solid phase in an ELISA, these monoclonal antibodies captured **peanut** antigen, which bound human IgE from patients with positive results to challenges to peanuts. The **Ara** h I monoclonal antibodies were found to be specific for **peanut** antigens when binding for other legumes was examined. In ELISA inhibition studies with the monoclonal antibodies, we identified four different antigenic sites on **Ara** h I. In related studies with pooled human IgE serum from patients with positive results to challenges to peanuts, we identified three similar IgE-binding epitopes. As a means of purifying the **Ara** h I allergen, we prepared an immunoaffinity column with monoclonal antibody 8D9. We eluted from this column the allergen **Ara** h I, which had a mean molecular weight of 63.5 kd and which bound human IgE from individual and pooled serum of patients with **peanut** sensitivity.

8/3,AB/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08112223 94141076 PMID: 8308186

The production of interferon-gamma in response to a major **peanut** allergy, **Ara** h II correlates with serum levels of IgE anti-**Ara** h II.

Dorion BJ; Burks AW; Harbeck R; Williams LW; Trumble A; Helm RM; Leung DY
Department of Pediatrics, National Jewish Center for Immunology and Respiratory Medicine, Denver, CO 80206.

Journal of allergy and clinical immunology (UNITED STATES) Jan **1994**, 93 (1 Pt 1) p93-9, ISSN 0091-6749 Journal Code: H53
Contract/Grant No.: AI-26629, AI, NIAID; AR-41256, AR, NIAMS
Languages: ENGLISH
Document type: Journal Article
Record type: Completed

The current study was undertaken to examine the potential role of T cells in the pathogenesis of **peanut** allergy. Peripheral blood mononuclear cells (PBMCs) from patients with **peanut** allergy, patients with asthma, and nonatopic normal control subjects were assessed for proliferation after stimulation with a 17 kd major **peanut** allergen (**Ara** h II), ovalbumin, casein, soy, and Candida albicans. We found that **Ara** h II and C. albicans induced significantly higher levels of proliferation than ovalbumin, casein, and soy. Because interferon-gamma (IFN-gamma) and interleukin-4 (IL-4) play critical roles in IgE regulation, we assessed the production of these cytokines after stimulation with C. albicans and **Ara** h II. C. albicans stimulated similar levels of IFN-gamma in all three study groups. In contrast, after stimulation with **Ara** h II, culture supernatants from PBMCs of subjects with **peanut** allergy contained significantly lower levels of IFN-gamma than did the PBMCs of the two control groups ($p = 0.02$). More important, there was a significant ($p = 0.05$) inverse correlation between the serum IgE anti-**Ara** h II levels and IFN-gamma production by PBMCs from the respective **peanut**-allergic patients. IL-4 protein was not detected in culture supernatants of PBMCs stimulated with **Ara** h II. However, amplification of cytokine gene transcripts by polymerase chain reaction did demonstrate IL-4 expression in **Ara** h II-stimulated PBMCs from both patients with **peanut** allergy and control subjects. These data suggest that the level of IFN-gamma production in response to **Ara** h II may be an important factor in determining the development of **peanut**-specific

IgE responses.

8/3,AB/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07438435 91349427 PMID: 1880317
Identification of a major **peanut** allergen, **Ara** h I, in patients with atopic dermatitis and positive **peanut** challenges.
Burks AW; Williams LW; Helm RM; Connaughton C; Cockrell G; O'Brien T
University of Arkansas for Medical Sciences, Little Rock.
Journal of allergy and clinical immunology (UNITED STATES) Aug **1991**, 88 (2) p172-9, ISSN 0091-6749 Journal Code: H53
Contract/Grant No.: R29AI26629-02, AI, NIAID; RO1CA40406, CA, NCI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Peanuts are among the most common causes of immediate hypersensitivity reactions to foods. Serum from nine patients with atopic dermatitis and a positive double-blind, placebo-controlled, food challenge to **peanut** were used to begin the process of identification and purification of the major **peanut** allergens. Identification of a major **peanut** allergen was accomplished by use of anion-exchange column chromatography, sodium dodecyl sulfate-polyacrylamide gel electrophoresis, ELISA, thin-layer isoelectric focusing, and IgE-specific immunoblotting. Anion-exchange chromatography revealed several fractions that bound IgE from the serum of the challenge-positive patient pool. By measuring antipeanut-specific IgE in the ELISA and in IgE-specific immunoblotting, we identified an allergenic component with two Coomassie brilliant blue staining bands by sodium dodecyl sulfate-polyacrylamide gel electrophoresis with a mean molecular weight of 63.5 kd. Examination of this fraction by the IgE antipeanut ELISA with individual serum and by the ELISA-inhibition assay with pooled serum, we identified this fraction as a major allergen. Thin-layer isoelectric focusing and immunoblotting of this 63.5 kd fraction revealed it to have an isoelectric point of 4.55. Based on allergen nomenclature of the IUIS Subcommittee for Allergen Nomenclature, this allergen is designated, **Ara** h I (Arachis hypogaea).

8/3,AB/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06913697 93094482 PMID: 1460200
Identification and characterization of a second major **peanut** allergen, **Ara** h II, with use of the sera of patients with atopic dermatitis and positive **peanut** challenge.
Burks AW; Williams LW; Connaughton C; Cockrell G; O'Brien TJ; Helm RM
University of Arkansas for Medical Sciences, Little Rock.
Journal of allergy and clinical immunology (UNITED STATES) Dec **1992**, 90 (6 Pt 1) p962-9, ISSN 0091-6749 Journal Code: H53
Contract/Grant No.: R29AI26629-02, AI, NIAID; RO1CA40406, CA, NCI
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Peanuts are frequently a cause of food hypersensitivity reactions in children. Serum from nine patients with atopic dermatitis and a positive double-blind, placebo-controlled, food challenge to **peanut** were used in the process of identification and purification of the **peanut** allergens. Identification of a second major **peanut** allergen was accomplished with use of various biochemical and molecular techniques. Anion exchange chromatography of the crude **peanut** extract produced several fractions that bound IgE from the serum of the patient pool with positive challenges. By measuring antipeanut specific IgE and by IgE-specific immunoblotting we have identified an allergic component that has two closely migrating bands with a mean molecular weight of 17 kd.

Two-dimensional gel electrophoresis of this fraction revealed it to have a mean isoelectric point of 5.2. According to allergen nomenclature of the IUIS Subcommittee for Allergen Nomenclature this allergen is designated, **Ara** h II (Arachis hypogaea).

8/3,AB/23 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12530168 BIOSIS NO.: 200000283670
Immunoassay for **peanut** allergen.
AUTHOR: Burks A Wesley(a); Helm Ricki M
AUTHOR ADDRESS: (a)Little Rock, AR**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1227 (4):pNo pagination Oct. 26, **1999**
MEDIUM: e-file.
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Peanuts are a common cause of food hypersensitivity reactions. The sera of 10 patients who had atopic dermatitis and a positive double-blind placebo-controlled food challenge to **peanut** were used to investigate the major allergens of **peanut**. Crude Florunner extracts were fractionated by anion-exchange chromatography using a step gradient (limit buffer, 0.05M BisTris/1.5M NaCl). One hundred microliters of each 2.0 ml fraction was dot-blotted onto nitrocellulose paper and IgE-binding activity assessed using the serum pool to select allergen-containing fractions. A protein peak (OD 280) which eluted at 10% NaCl and demonstrated intense IgE-binding was further analyzed by two-dimensional SDS-PAGE/immunoblot analysis. The majority of this fraction is a protein which has a molecular weight of 17 kD and a pI of 5.2. Sequencing data from the N-terminus revealed the following initial 9 amino acids: (*)-Q-Q-(*)-E-L-Q-D-L. Based on IgE-binding activity and no known amino acid sequence identity to other allergens, this allergen is designated **Ara** h II.

1999

8/3,AB/24 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12034218 BIOSIS NO.: 199900314737
Modification of a major **peanut** allergen leads to loss of IgE binding.
AUTHOR: Burks A Wesley; King Nina; Bannon Gary A(a)
AUTHOR ADDRESS: (a)UAMS/ACH, 4301 W. Markham, Slot 516, Little Rock, AR, 72205**USA
JOURNAL: International Archives of Allergy and Immunology 118 (2-4):p 313-314 Feb.-April, **1999**
ISSN: 1018-2438
DOCUMENT TYPE: Article
RECORD TYPE: Citation
LANGUAGE: English
1999

8/3,AB/25 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12031545 BIOSIS NO.: 199900312064

Tertiary structure and biophysical properties of a major **peanut** allergen, implicati[redacted] for the production of a hypoa[redacted]rgenic protein.
AUTHOR: Bannon Gary A(a); Shin David; Maleki Soheila; Kopper Randall; Burks A Wesley
AUTHOR ADDRESS: (a)UAMS/ACH, 4301 W. Markham, Slot 516, Little Rock, AR, 72205**USA
JOURNAL: International Archives of Allergy and Immunology 118 (2-4):p 315-316 Feb.-April, **1999**
ISSN: 1018-2438
DOCUMENT TYPE: Article
RECORD TYPE: Citation
LANGUAGE: English
1999

8/3,AB/26 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11912023 BIOSIS NO.: 199900158132
Modulation of the reactivity of the major **peanut** allergen **Ara** h 1 through epitope characterization, structural analysis, and mutation.
AUTHOR: Shin D S(a); Compadre C M; Sampson H A; Burks A W; Bannon G A
AUTHOR ADDRESS: (a)Dep. Biochem. Mol. Biol., Biomed. Visualization Cent., Univ. Arkansas Med. Sci., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 103 (1 PART 2):pS99 Jan., **1999**
CONFERENCE/MEETING: 55th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Orlando, Florida, USA February 26-March 3, 1999
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1999

8/3,AB/27 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11906931 BIOSIS NO.: 199900153040
Mutational analysis of the IgE-binding epitopes of the **peanut** allergen, **Ara** h 3: A member of the glycinin family of seed-storage proteins.
AUTHOR: Rabjohn P(a); Burks A W(a); Sampson H A; Bannon G A(a)
AUTHOR ADDRESS: (a)Univ. Arkansas Med. Sci., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 103 (1 PART 2):pS101 Jan., **1999**
CONFERENCE/MEETING: 55th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Orlando, Florida, USA February 26-March 3, 1999
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1999

8/3,AB/28 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11890177 BIOSIS NO.: 199900136286
The effect of digestion on the allergenicity of the major **peanut** allergen **Ara** h 1.
AUTHOR: Kopper R A(a); Maleki S; Sampson H A; Burks A W(a); Bannon G A(a)

AUTHOR ADDRESS: (a)Univ. Arkansas Med. Sci., Little Rock, AR 72201**USA
JOURNAL: Journal of Allergy and Clinical Immunology 103 (1 PART 2):pS67 Jan., **1999**
CONFERENCE/MEETING: 55th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Orlando, Florida, USA February 26-March 3, 1999
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1999

8/3,AB/29 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11888353 BIOSIS NO.: 199900134462
Modulation of the allergenicity of a major **peanut** allergen, **Ara** h 2 by mutagenesis of its immunodominant IgE binding epitopes.
AUTHOR: King N(a); Maleki S J; Sampson H; Burks A W(a); Bannon G A(a)
AUTHOR ADDRESS: (a)Univ. Arkansas Med. Sci., Little Rock, AR 72201**USA
JOURNAL: Journal of Allergy and Clinical Immunology 103 (1 PART 2):pS67 Jan., **1999**
CONFERENCE/MEETING: 55th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Orlando, Florida, USA February 26-March 3, 1999
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1999

8/3,AB/30 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11645898 BIOSIS NO.: 199800427629
Peanut allergens.
AUTHOR: Burks W(a); Sampson H A; Bannon G A
AUTHOR ADDRESS: (a)Dep. Pediatrics, Div. Pediatric Allergy Immunology, 800 Marshall Street, Little Rock, AR 72207**USA
JOURNAL: Allergy (Copenhagen) 53 (8):p725-730 Aug., **1998**
ISSN: 0105-4538
DOCUMENT TYPE: Article
RECORD TYPE: Citation
LANGUAGE: English
1998

8/3,AB/31 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11373371 BIOSIS NO.: 199800154703
Glycinin, a third major **peanut** allergen identified by soy-adsorbed serum IgE from **peanut** sensitive individuals.
AUTHOR: Rabjohn P; West C M; Helm E; Helm R; Stanley J S; Huang S K; Sampson H; Burks A W; Bannon G A
AUTHOR ADDRESS: Univ. Arkansas Med. Sch., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 101 (1 PART 2):pS240 Jan., **1998**
CONFERENCE/MEETING: 54th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Washington, DC, USA March 13-18, 1998
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749

RECORD TYPE: Citation
LANGUAGE: English
1998

8/3,AB/32 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11373369 BIOSIS NO.: 199800154701
Rapid isolation of **peanut** allergens and their physical chemical and biological characterization.
AUTHOR: Kopper R(a); Maleki S; Helm R; Sampson H; Huang S K; Cockrell G; Burks A W; Bannon G A
AUTHOR ADDRESS: (a)Univ. Arkansas Med. Sch., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 101 (1 PART 2):pS240 Jan., **1998**
CONFERENCE/MEETING: 54th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Washington, DC, USA March 13-18, 1998
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1998

8/3,AB/33 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11373368 BIOSIS NO.: 199800154700
Characterization of major **peanut** allergens.
AUTHOR: Sampson H A(a); Buckley N; Huang S K; Burks A W; Bannon G A
AUTHOR ADDRESS: (a)Mt. Sinai Sch. Med., New York, NY**USA
JOURNAL: Journal of Allergy and Clinical Immunology 101 (1 PART 2):pS240 Jan., **1998**
CONFERENCE/MEETING: 54th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Washington, DC, USA March 13-18, 1998
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1998

8/3,AB/34 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11372757 BIOSIS NO.: 199800154089
Tertiary structure of the major **peanut** allergen **Ara** h 1: Implications for the bioengineering of a hypoallergenic protein.
AUTHOR: Shin D(a); Sampson H; Helm R; Huang S K; Burks A W; Bannon G A
AUTHOR ADDRESS: (a)Univ. Ark. Med. Sch., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 101 (1 PART 2):pS90 Jan., **1998**
CONFERENCE/MEETING: 54th Annual Meeting of the American Academy of Allergy, Asthma and Immunology Washington, DC, USA March 13-18, 1998
SPONSOR: American Academy of Allergy, Asthma, and Immunology
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1998

8/3,AB/35 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11333958 BIOSIS NO.: 199800115290
Immunological responses in **peanut** allergy.
AUTHOR: Dean T P(a)
AUTHOR ADDRESS: (a)David Hilde Asthma Allergy Res. Cent., St. Mary's Hosp., Parkhurst Rd., Newport, Isle Wight, PO3**UK
JOURNAL: Clinical and Experimental Allergy 28 (1):p7-9 Jan., **1998**
ISSN: 0954-7894
DOCUMENT TYPE: Editorial
RECORD TYPE: Citation
LANGUAGE: English
1998

8/3,AB/36 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10876701 BIOSIS NO.: 199799497846
Food allergens and their modifications by agro-food technology.
AUTHOR: Moneret-Vautrin Denise Anne
AUTHOR ADDRESS: Serv. Med. D, Med. Interne Immunologie Clinique Allergologie, Hopital Central, 29 Avenue Marechal-de**France
JOURNAL: Cahiers Agricultures 6 (1):p21-29 **1997**
ISSN: 1166-7699
DOCUMENT TYPE: Literature Review
RECORD TYPE: Abstract
LANGUAGE: French; Non-English
SUMMARY LANGUAGE: French; English

ABSTRACT: Allergens are a special variety of antigens, substances capable of inducing a particular immune response, called "allergic", linked with the synthesis of specific IgEs. This is due to limited protein portions, antigenic determinants or epitopes. Epitopes are generally located at the surface of proteins, in zones of high flexibility and hydrophily. Some epitopes prompt a delayed hypersensibility response, others an IgE or IgG antibody response. There are conformational epitopes (destroyed when the tertiary structure is lost) and sequential epitopes, depending on the aminoacid chain (primary structure). A major allergen is a purified antigen against which at least 50% of tested patients show specific IgE, and which immediately produces positive skin tests, at very low concentration, with at least 90% of subjects having an allergic illness related to this allergen. Isoallergens are molecules with the same molecular weight, identical biological functions (e.g. the same enzymatic activity) and with at least 67% homology to the aminoacid sequence. Allergenic variants are very similar molecule sequences. Natural allergens may undergo posttranscriptional modifications: glycosylation, acylation, methylation, etc. General characteristics of food allergens The molecular weight of most food allergens is between 10,000 and 70,000 Da. Some are larger in size, such as **Ara** h 1 (63,5 kDa) and **Ara** h 2 (17 kDa), which exist as polymers of 200 to 300kDa. They are often glycoproteins with an acid isoelectric point. They are hydrosoluble or soluble in saline solution and belong to the family of albumins (soluble in water) or globulins (soluble in saline solution). More rarely they are soluble in alcohol, such as gliadines. They are usually resistant to heat and proteolysis (3, 11-14). Vegetable allergens have been closely studied in recent years. The classical notion of slightly allergenic foods and thermolabile vegetable allergens has been replaced by an inverse concept that allergies to fruits and vegetables are common, with allergens located in aqueous fruits and vegetables, as well as in seeds and particularly in oil-seeds, varying within species and with maturation. Incriminated allergens are proteins that are

functionally indispensable and have been preserved in the course of evolution: pan allergens (19-21). Several groups can be distinguished: profilins, PR (pathogenesis-related) proteins (21), enzymes, storage proteins of seeds, stress proteins (heat shock proteins) and Carbohydrate residues (CHD). The conditions of allergenicity depend upon atopy and the characteristics of the responsible protein. The genetic field of atopy, favours the synthesis of specific IgE against environmental antigens. Genetic factors can thus explain why, with respect to the same allergen and identical stimulation conditions, individuals respond with important variations in quantity and affinity of IgE antibodies. Proteins characteristics are: thermic denaturation or resistance; allergen quantity gaining access to mucous membrane; privileged contact of a molecule in sufficient quantity with mucosa; digestibility (enzymatic destruction of food proteins), possibility of a better enterocytic endocytose to favour antigenic presentation to T lymphocytes (hydrophobic proteins such as **peanut**-oil allergens); existence of crossed reactions between pollinic allergens and vegetable food allergens, so that specific IgE of the first can induce an allergic reaction when they get in contact with the second. This is due to important structural homologies of these pan allergens (19, 20). The incidences of agro-food technologies on allergenicity are the followings: Well-identified risks of food allergy by additives and fabrication auxillaries. These risks are linked to food proteins: caseinates used as texture agents (38), egg lysozyme used as bactericide in cheese fabrication (39), papain, clearing agent for beers (40L fungic alpha-amylase improving flours (41, 42), fungic lactase added to certain milks (43), etc.; cochineal carmine, a dye for milk products, confectionary, appetizers. (43), vanilla, a flavour forcing its way into a large amount of products (44), etc. Food-storing at ambiant temperature or at + 4 degree C. modification of allergenicity. Role of heating on food reactogenicity. Occurrence of neo-allergens due to heating (46). The allergenic risk of transgenic foods as been considered by the FDA since 1992 (56) and has recently been confirmed for a transgenic soya bean containing the 2S Brazil nut albumin. Introduction of new proteins of bacterial origin in foods for their herbicide-resistance qualities, has already been achieved. There does exist the possibility of de novo allergenicity of these proteins, like the possibility of crossed reactions with bacterial proteins having human tropism. New food proteins. Food allergens are easy objects for various modifications by agro-food technologies. Among them, numerous hydrolysis processes tend to modify the functional qualities of proteins. Besides the fact that hydrolysis does not seem to reduce the risk of reactogenicity (63), we must not forget that most allergens have an average molecular weight of 10 to 40 kDa, and that manufacturing process increasing the quantity of peptides in this weight bracket, could produce neo-allergens. On the contrary, we must consider the possibility of reducing food allergenicity. For instance, there is the whole range of milks, from the milk with partially hydrolysed lactoserum proteins to casein, soy or pork collagen elaborate hydrolysis products, to aminoacid-based milk. Selective depletion of major allergen in a food is already being dealt with for rice and wheat flour (65, 66). There are now increasing interactions between the basic sciences, the medical world and commercial developments.

1997

8/3,AB/37 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10822147 BIOSIS NO.: 199799443292
Characterization of a major **peanut** allergen: Mutational analysis of the **Ara** h 1 IgE binding epitopes.
AUTHOR: Shin D; Sampson H A; Huang S K; Compadre C; Burkds A W; Bannon G A
AUTHOR ADDRESS: Univ. Arkansas Med. Sch., Little Rock, AR**USA

JOURNAL: Journal of Allergy and Clinical Immunology 99 (1 PART 2):pS141 **1997**
CONFERENCE/MEETING: Joint Meeting of the American Academy of Allergy, Asthma and Immunology, the American Association of Immunologists and the Clinical Immunology Society San Francisco, California, USA February 21-26, 1997
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1997

8/3,AB/38 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10822146 BIOSIS NO.: 199799443291
Cloning, epitope mapping, and mutational analysis of **Ara** h 2, a major **peanut** allergen.
AUTHOR: Burks A W; King N; West C M; Stanley J S; Cockrell G; Helm R; Huang S K; Sampson H A; Bannon G A
AUTHOR ADDRESS: Univ. Arkansas Med. Sch., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 99 (1 PART 2):pS141 **1997**
CONFERENCE/MEETING: Joint Meeting of the American Academy of Allergy, Asthma and Immunology, the American Association of Immunologists and the Clinical Immunology Society San Francisco, California, USA February 21-26, 1997
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1997

8/3,AB/39 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10822145 BIOSIS NO.: 199799443290
Ara h 3, a **peanut** allergen identified by using **peanut** sensitive patient sera absorbed with soy proteins.
AUTHOR: Bannon G A; Li X-F; Rabjohn P; Stanley J S; Burks A W; Huang S K; Sampson H A
AUTHOR ADDRESS: Univ. Arkansas Med. Sch., Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 99 (1 PART 2):pS141 **1997**
CONFERENCE/MEETING: Joint Meeting of the American Academy of Allergy, Asthma and Immunology, the American Association of Immunologists and the Clinical Immunology Society San Francisco, California, USA February 21-26, 1997
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1997

8/3,AB/40 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10262423 BIOSIS NO.: 199698717341
Peanut allergen **Ara** h I: Identifying the clinically relevant epitopes.
AUTHOR: Bannon G A(a); Stanley J S; Cockrell G; Helm R M; Sampson H A; Burks A W

AUTHOR ADDRESS: (a)Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 97 (1 PART 3):p330
1996
CONFERENCE/MEETING: Fifty-second Annual Meeting of the American Academy of Allergy Asthma and Immunology New Orleans, Louisiana, USA March 15-20, 1996
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1996

8/3,AB/41 (Item 19 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10262422 BIOSIS NO.: 199698717340
Characterization of the major **peanut** allergen **Ara** h 1 on protein level.
AUTHOR: Becker W-M; Buschmann L; Schlaak M
AUTHOR ADDRESS: Borstel**Germany
JOURNAL: Journal of Allergy and Clinical Immunology 97 (1 PART 3):p330
1996
CONFERENCE/MEETING: Fifty-second Annual Meeting of the American Academy of Allergy Asthma and Immunology New Orleans, Louisiana, USA March 15-20, 1996
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1996

8/3,AB/42 (Item 20 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10262421 BIOSIS NO.: 199698717339
IgE-binding epitopes on **Ara** h I, a legume vicilin protein and a major **peanut** allergen.
AUTHOR: Burks A W; Stanley J S; Cockrell G; Blake T; Helm R M; Bannon G A
AUTHOR ADDRESS: Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 97 (1 PART 3):p329
1996
CONFERENCE/MEETING: Fifty-second Annual Meeting of the American Academy of Allergy Asthma and Immunology New Orleans, Louisiana, USA March 15-20, 1996
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1996

8/3,AB/43 (Item 21 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10262420 BIOSIS NO.: 199698717338
Amino acid sequence analysis and cloning of the major **peanut** allergen, **Ara** h II.
AUTHOR: Stanley J S; Burks A W; Cockrell G; Helm R M; Bannon G A
AUTHOR ADDRESS: Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 97 (1 PART 3):p329
1996
CONFERENCE/MEETING: Fifty-second Annual Meeting of the American Academy of Allergy Asthma and Immunology New Orleans, Louisiana, USA March 15-20,

1996
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1996

8/3,AB/44 (Item 22 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10218517 BIOSIS NO.: 199698673435
Dual inoculation of **peanut** with Glomus sp. and Bradyrhizobium sp. enhanced the symbiotic nitrogen fixation as assessed by 15N-technique.
AUTHOR: Khan Monowar Karim; Sakamoto Kazunori; Yoshida Tomio
AUTHOR ADDRESS: Fac. Horticulture, Chiba Univ., Matsudo, 271**Japan
JOURNAL: Soil Science and Plant Nutrition 41 (4):p769-779 **1995**
ISSN: 0038-0768
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The response of **peanut** (Arachis hypogaea L.) to inoculation with vesicular-arbuscular mycorrhizal (VAM) fungi (Glomus etunicatum) and Bradyrhizobium sp. was studied in pots by the acetylene reduction activity (**ARA**) and 'A-value' methods. The soil used was a Light-coloured Andosol and the treatments consisted of the inoculation of VAM fungi only, inoculation of Bradyrhizobium only, dual inoculation of VAM fungi and Bradyrhizobium and control, under non-sterilized and sterilized soil conditions. In the non-sterilized soil the **ARA** and nitrogen fixation determined by the 'A-value' method increased significantly only by dual inoculation of VAM fungi and Bradyrhizobium at 100 days after planting (DAP), but no significant difference was observed at 70 DAP. In the case of dual inoculation, 75% of the nitrogen of the plant was derived from fixation whereas the plants inoculated only with Bradyrhizobium derived 68% of their nitrogen from fixation and the control plants, 64%. Amount of P in plant increased significantly only by dual inoculation with VAM fungi and Bradyrhizobium. In the sterilized soil a highly significant increase in the **ARA** was observed of the dual inoculation at all the sampling times. Nitrogen fixation determined by the A-value technique and N and P contents in plant also increased significantly by dual inoculation. Results obtained by the A-value method showed that plants with dual inoculation derived 68% of their nitrogen from fixation while the plants inoculated only with Bradyrhizobium, 38%. From our this study we conclude that nitrogen fixation as well as N and P contents in **peanut** increased significantly only by dual inoculation with VAM fungi and Bradyrhizobium.

1995

8/3,AB/45 (Item 23 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09820411 BIOSIS NO.: 199598275329
Nitrogen fixation in **peanut** at various concentrations of 15N-urea and slow release 15N-fertilizer.
AUTHOR: Khan Monowar Karim; Yoshida Tomio
AUTHOR ADDRESS: Faculty Horticulture, Chiba Univ., Matsudo 271**Japan
JOURNAL: Soil Science and Plant Nutrition 41 (1):p55-63 **1995**
ISSN: 0038-0768
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Nitrogen fi[redacted]ion of **peanut** (Arachis hypogae .) was studied using pots (1 kg soil/pot) at various concentrations of 15N-urea and 15N-super-IB (a slow release N fertilizer). The soil used was an Andosol with the following characteristics pH 6.02, CEC 23.4 cmol(+) kg-1, total-C 20.9 g kg-1, total-N 2.5 g kg-1, and a loam texture. The number and weight of the nodules and acetylene reduction activity (**ARA**) decreased by the addition of 15N-urea but not by the addition of 15N-super-IB even at higher doses. Irrespective of the type of fertilizer or the amount of nitrogen applied, the highest **ARA** of the crop was observed between 75 and 98 d after sowing (DAS). Nitrogen fixation determined by the A-value method showed that the addition of higher doses of 15N-urea markedly decreased the fixation, unlike that of 15N-super-IB. At 75 DAS the percentage of nitrogen derived from fixation (%Ndfa) at 100, 200, and 400 mg N per pot was 61, 54, and 29 (333, 308, and 171 mg N per plant), respectively when N was applied as 15N-urea, and 63, 62, and 61 (333, 343, and 349 mg N per plant), respectively when applied as 15N-super-IB. The %Ndfa at 98 DAS in **peanut** treated with 100, 200, and 400 mg N per pot was 69, 63, and 52 (719, 688, and 578 mg N per plant), respectively when N was applied as 15N-urea and the %Ndfa at the same doses of 15N-super-IB was 69, 68, and 64 (773, 789, and 787 mg N per plant), respectively. Hence, it can be concluded that the symbiotic nitrogen fixation of **peanut** was not suppressed by the addition of slow release Nfertilizer even at higher doses under the current experimental conditions.

1995

8/3,AB/46 (Item 24 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09702900 BIOSIS NO.: 199598157818
Ara h I, a major allergen involved in **peanut** hypersensitivity, has multiple IgE binding domains.
AUTHOR: Stanley J S; Burks A W; Helm R M; Cockrell G; Bannon G A
AUTHOR ADDRESS: Little Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 95 (1 PART 2):p333 **1995**
CONFERENCE/MEETING: Fifty-first Annual Meeting of the American Academy of Allergy and Immunology New York, New York, USA February 24-March 1, 1995
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1995

8/3,AB/47 (Item 25 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09157869 BIOSIS NO.: 199497166239
The production of interferon-gamma in response to a major **peanut** allergy, Arh h II, correlates with serum levels of IgE anti-**Ara** h II.
AUTHOR: Dorion Brandon J; Burks A Wesley; Harbeck Ronald; Williams Larry W; Trumble Anne; Helm Ricki M; Leung Donald Y M(a)
AUTHOR ADDRESS: (a)Dep. Pediatrics, National Jewish Cent. Immunology Respiratory Med., 1400 Jackson Street, Denver,**USA
JOURNAL: Journal of Allergy and Clinical Immunology 93 (1 PART 1):p93-99 **1994**
ISSN: 0091-6749
DOCUMENT TYPE: Article
RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The current study was undertaken to examine the potential role of T cells in the pathogenesis of **peanut** allergy. Peripheral blood mononuclear cells (PBMCs) from patients with **peanut** allergy, patients with asthma, and nonatopic normal control subjects were assessed for proliferation after stimulation with a 17 kd major **peanut** allergen (**Ara** h II), ovalbumin, casein, soy, and Candida albicans. We found that **Ara** H II and C. albicans induced significantly higher levels of proliferation than ovalbumin, casein, and soy. Because interferon-gamma (IFN-gamma) and interleukin-4 (IL-4) play critical roles in IgE regulation, we assessed the production of these cytokines after stimulation with C. albicans and **Ara** h II. C. albicans stimulated similar levels of IFN-gamma in all three study groups. In contrast, after stimulation with **Ara** H II, culture supernatants from PMBCs of subjects with **peanut** allergy contained significantly lower levels of IFN-gamma than did the PBMCs of the two control groups ($p = 0.02$). More important, there was a significant ($p = 0.05$) inverse correlation between the serum IgE anti-**Ara** h II levels and IFN-gamma production by PBMCs from the respective **peanut**-allergic patients. IL-4 protein was not detected in culture supernatants of PBMCs stimulated with **Ara** h II. However, amplification of cytokine gene transcripts by polymerase chain reaction did demonstrate IL-4 expression in **Ara** h II-stimulated PBMCs from both patients with **peanut** allergy and control subjects. These data suggest that the level of IFN-gamma production in response to **Ara** h II may be an important factor in determining the development of **peanut**-specific IgE responses.

1994

8/3,AB/48 (Item 26 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08537803 BIOSIS NO.: 199344087803
Cloning of the **Ara** H II **peanut** allergen by polymerase chain reaction (PCR) amplification.
AUTHOR: Burks A W; Helm R M; Cockrell G; Stanley J S; Bannon G A
AUTHOR ADDRESS: Little, Rock, AR**USA
JOURNAL: Journal of Allergy and Clinical Immunology 91 (1 PART 2):p341 **1993**
CONFERENCE/MEETING: Forty-ninth Annual Meeting of the American Academy of Allergy and Immunology Chicago, Illinois, USA March 12-17, 1993
ISSN: 0091-6749
RECORD TYPE: Citation
LANGUAGE: English
1993

8/3,AB/49 (Item 27 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08140545 BIOSIS NO.: 000093127693
COMPARISONS OF AMMONIUM-M NITRATE-M METABOLIC RATIOS AMONG CELL CULTURES OF HIGHER PLANTS
AUTHOR: OGAWA H
AUTHOR ADDRESS: FAC. AGRIC., TAMAGAWA UNIV., MACHIDA-SHI, TOKYO 194, JPN.
JOURNAL: BULL FAC AGRIC TAMAGAWA UNIV 0 (31). 1991. 123-140. **1991**
FULL JOURNAL NAME: Bulletin of the Faculty of Agriculture Tamagawa University
CODEN: TDNHA
RECORD TYPE: Abstract
LANGUAGE: JAPANESE

ABSTRACT: Cell cultur[redacted]derived from six species of hi[redacted]r plants (two Nicotiana SP: NG and SAM, Chenopodium album: CA, **peanut**: **ARA**, alfalfa: ALF and cassava: MUK) were used to analyze theortically the relationships between cell growth rates and main mineral compositions in media, focusing on absorptions and metabolism of NH4+ and NO3- which play one of most important roles in the cell growth rate. The results were elucidated as follows. The theoretical equation, RCCOP- 2NO3.m- + SO4.m2- = Nm + (C-A)-Ex was presented to the metabolic transition of the maximum capacity of carboxylates RCCOP-, which should be induced by the reduction and metabolism of NO3- and SO42- absorbed into the cells, because these carboxylates are main precursors of amino acids and proteins. It was suggested that the cells should be cultured on the media contributing high RCOOP- in order to keep their high growth rates. The average value of RCOOP- in each species of cells on 13 treatments of media ranged from 270 for CA to 450 meq/100 g dry cells for MUK. Decrease of RCOOP- (.simeq. 2 NO3.m-) was generally caused by the interference of NH4+ absorbed from media, while RCOOP- or NO3.m- was promoted by a certain level of NH4+ absorbed in MUK and ALF. Nm/RCOOP- values were 1.5 .apprx. 1.7 higher in Nicotiana cells, NG and SAM, and 1.0 .apprx. 1.2, lower in leguminous cells, ALF and **ARA**. It seemed that N fixation per RCOO- was lower in ALF and **ARA** than in the other cells. The Nm/RCOOP- values in the cells with higher growth rates were somewhat lower than their upper critical values. Therefore, it is assumed that the cells with higher growth rates still retained their residual RCOOP-. The theoretical equation indicating the upper critical value of NH4.m+ in the cells with higher growth rates was presented as follows. NH4.m+/NO3.m- .ltoreq. 2n - 1 + n (SO4.m2-/NO3.m-). Here, n corresponds to the upper critical value of Nm/RCOOP- in the cells higher growth rates. The upper critical values of NH4.m+/NO3.m- were 2.6 .apprx. 3.1, higher in Nicotiana cells, NG and SAM, and 1.6 .apprx. 1.8, lower in leguminous cells, ALF and **ARA**. In general, higher cell growth rates were obtained at the values somwewhat lower than the upper clinical values of NH4.m+/NO3.m/NO3.m-. The relation of the cell growth rate in the (C-A)/Nm ratio characterizing the extext of nitrogen or NH4+ nutrition in the cells was studied. The theoretical equation was, (C - A)/Nm = RCOOP-/Nm + Ex/Nm-1. The cells offered high growth rates in relatively wide ranges of (C-A)/Nm vaues, while ALF having lower nitrogen fixation showed its higher growth rates only in the lower and narrow range of (C-A)/NM values, 0.14 .apprx. 0.05. The cell conditions with Nm/RCOOP- and RCOOm- > RCOOP- were caused by most of the cells on the media with higher NH4+ concentrations. The former condition of Nm/RCOOP- indicates that cells may have no more OH- + HCO3- + RCOO- to neutralize H+ cause by NH4+ metabolism, and the latter of RCOOm- > RCOOP- indicates that cells may have no more RCOOP- to assimilate NH4+.

1991

8/3,AB/50 (Item 28 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08104311 BIOSIS NO.: 000042096509
MONOCLONAL ANTIBODY ENZYME-LINKED IMMUNOSORBENT ASSAY ELISA FOR **ARA** H I A MAJOR **PEANUT** ALLERGEN
AUTHOR: COCKRELL G; CONNAUGHTON C; HELM R M; BURKS A W
AUTHOR ADDRESS: LITTLE ROCK, ARKANSAS.
JOURNAL: FORTY-EIGHTH ANNUAL MEETING OF THE AMERICAN ACADEMY OF ALLERGY AND IMMUNOLOGY, ORLANDO, FLORIDA, USA, MARCH 6-11, 1992. J ALLERGY CLIN IMMUNOL 89 (1 PART 2). 1992. 298. **1992**
CODEN: JACIB
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

1992

8/3,AB/51 (Item 29 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07582750 BIOSIS NO.: 000040105914
IDENTIFICATION OF A SECOND MAJOR **PEANUT** ALLERGEN IN PATIENTS WITH ATOPIC DERMATITIS AND **PEANUT** HYPERSENSITIVITY
AUTHOR: BURKS A W; HELM R M; WILLIAMS L W; O'BRIEN T
AUTHOR ADDRESS: LITTLE ROCK, ARAKANSAS.
JOURNAL: FORTY-SEVENTH ANNUAL MEETING OF THE AMERICAN ACADEMY OF ALLERGY AND IMMUNOLOGY, SAN FRANCISCO, CALIFORNIA, USA, MARCH 1-6, 1991. J ALLERGY CLIN IMMUNOL 87 (1 PART 2). 1991. 191. **1991**
CODEN: JACIB
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH
1991

8/3,AB/52 (Item 30 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

05254271 BIOSIS NO.: 000082094896
RECTAL ABSORPTION AND LYMPHATIC UPTAKE OF CYTOSINE ARABINOSIDE IN RATS
AUTHOR: NISHIHATA T; KIM S; LIVERSIDGE G G; HIGUCHI T
AUTHOR ADDRESS: SMITH KLINE AND FRENCH F112, 1500 SPRING GARDEN ST., PHILADELPHIA, PA. 19101, USA.
JOURNAL: INT J PHARM (AMST) 31 (3). 1986. 185-192. **1986**
FULL JOURNAL NAME: International Journal of Pharmaceutics (Amsterdam)
CODEN: IJPHD
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Enhanced rectal absorption and lymphatic uptake of **Ara**-C is observed when administered in conjunction with salicylate adjuvants alone or in combination with any of the following adjuvants: glycerol, glycerol monooleate or **peanut** butter. Uptake into the lymphatic system is also enhanced when **Ara**-C is administered intravenously and glycerol monooleate is administered rectally. Increased lymphatic uptake was attributed to increased lymph flow and selective transport specificity of **Ara**-C in the rectal area caused by the adjuvants. Surgical effects of thoracic cannulation cause a decrease in serum **Ara**-C levels which may be attributed to a number of physiological factors.

1986

8/3,AB/53 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

08226920 Genuine Article#: 259FG Number of References: 53
Title: Biochemistry of food allergens
Author(s): Stanley JS; Bannon GA (REPRINT)
Corporate Source: UNIV ARKANSAS MED SCI,DEPT PEDIAT & BIOCHEM & MOL BIOL/LITTLE ROCK//AR/72205 (REPRINT); UNIV ARKANSAS MED SCI,DEPT PEDIAT & BIOCHEM & MOL BIOL/LITTLE ROCK//AR/72205
Journal: CLINICAL REVIEWS IN ALLERGY & IMMUNOLOGY, **1999**, V17, N3 (FAL), P279-291
ISSN: 1080-0549 Publication date: 19990900
Publisher: HUMANA PRESS INC, 999 RIVERVIEW DRIVE SUITE 208, TOTOWA, NJ

07512
Language: English [redacted]ument Type: REVIEW

8/3,AB/54 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07858475 Genuine Article#: 216QW Number of References: 53
Title: Biochemical aspects of food allergens (ABSTRACT AVAILABLE)
Author(s): Stanley JS; Bannon GA (REPRINT)
Corporate Source: UNIV ARKANSAS MED SCI,DEPT BIOCHEM & MOL BIOL, 4301 W MARKHAM/LITTLE ROCK//AR/72205 (REPRINT); UNIV ARKANSAS MED SCI,DEPT BIOCHEM & MOL BIOL/LITTLE ROCK//AR/72205; UNIV ARKANSAS MED SCI,DEPT BIOCHEM & MOL BIOL, DEPT PEDIAT/LITTLE ROCK//AR/72205
Journal: IMMUNOLOGY AND ALLERGY CLINICS OF NORTH AMERICA, **1999**, V19, N3 (AUG), P605-&
ISSN: 0889-8561 Publication date: 19990800
Publisher: W B SAUNDERS CO, INDEPENDENCE SQUARE WEST CURTIS CENTER, STE 300, PHILADELPHIA, PA 19106-3399
Language: English Document Type: ARTICLE
Abstract: Several scientific advances concerning adverse food reactions have been made in the last several years. One of the more important advances has been the identification of specific food allergens that can precipitate the well-established clinical symptoms characteristic of a type I hypersensitivity reaction. Current understanding about the nature of food allergens extends to the identification of the epitopes on these allergens, the pathophysiology of the clinical reaction, and the diagnostic methods used to identify patients. Little information, however, exists on the molecular structure of proteins that predispose them to be allergens or on the structural aspects of allergen-IgE interactions. Food allergens must be studied extensively if new treatments for allergic diseases are to be developed.

8/3,AB/55 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07810481 Genuine Article#: 211EM Number of References: 49
Title: **Peanut** allergy: A major public health issue
Author(s): Warner JO (REPRINT)
Corporate Source: UNIV SOUTHAMPTON,SOUTHAMPTON GEN HOSP/SOUTHAMPTON/HANTS/ENGLAND/ (REPRINT)
Journal: PEDIATRIC ALLERGY AND IMMUNOLOGY, **1999**, V10, N1 (FEB), P 14-20
ISSN: 0905-6157 Publication date: 19990200
Publisher: MUNKSGAARD INT PUBL LTD, 35 NORRE SOGADE, PO BOX 2148, DK-1016 COPENHAGEN, DENMARK
Language: English Document Type: REVIEW

8/3,AB/56 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07459581 Genuine Article#: 168NE Number of References: 26
Title: Indirect competitive ELISA for determination of traces of **peanut** (Arachis hypogaea L.) protein in complex food matrices (ABSTRACT AVAILABLE)
Author(s): Holzhauser T; Vieths S (REPRINT)
Corporate Source: PAUL EHRLICH INST,DEPT ALLERGOL, PAUL EHRLICH STR 51-59/D-63225 LANGEN//GERMANY/ (REPRINT); PAUL EHRLICH INST,DEPT ALLERGOL/D-63225 LANGEN//GERMANY/
Journal: JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, **1999**, V47, N2 (

FEB), P603-611
ISSN: 0021-8561 Publication date: 19990200
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036
Language: English Document Type: ARTICLE
Abstract: An indirect competitive ELISA was developed allowing the detection of hidden **peanut** protein residues down to 2 ppm (micorgrams per gram) in various foods. The high-titer, **peanut** -specific polyclonal antiserum used recognized potentially allergenic proteins in both native and roasted peanuts. In the absence of a food matrix, extractable protein from roasted peanuts was detected at 104 +/- 13%. From various food items, **peanut** protein at greater than or equal to 13 ppm was recovered between 84 and 126%, and at 2 ppm of **peanut** protein recovery was 143 +/- 6%. Intra- and interassay precision was <15%. In 5 of 17 commercial food products without declaration of **peanut** components, between 2 and 18 ppm of **peanut** protein was detected. This is the first assay based on commercially available reactants that allows the reliable determination of trace amounts of hidden **peanut** allergens in a variety of complex food matrices.

8/3,AB/57 (Item 5 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07382873 Genuine Article#: 158JM Number of References: 21
Title: Allergy to lentils in Mediterranean pediatric patients (ABSTRACT AVAILABLE)
Author(s): Pascual CY (REPRINT) ; FernandezCrespo J; SanchezPastor S; Padial MA; DiazPena JM; MartinMunoz F; MartinEsteban M
Corporate Source: HOSP INFANTIL LA PAZ,LAB IMMUNOALERGIA, CASTELLANA 261/MADRID 28046//SPAIN/ (REPRINT); HOSP 12 OCTUBRE,/MADRID//SPAIN/
Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **1999**, V103, N1,1 (JAN), P154-158
ISSN: 0091-6749 Publication date: 19990100
Publisher: MOSBY-YEAR BOOK INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO 63146-3318
Language: English Document Type: ARTICLE
Abstract: Background: Peanuts and soybeans are the major legumes involved in human food allergy; however, scarce data exist on adverse reactions to other temperate legumes, such as lentils.

Objective: The purpose of this study was to identify patients who are allergic to lentils, to assess clinical features and other associated food allergies, and to characterize allergens in lentil extract.

Methods: Twenty-two children each with a history of adverse reactions to lentils were enrolled in the study. The diagnosis of lentil allergy was based on food challenges or a concerning history of anaphylaxis, with positive skin tests and/or specific serum IgE to lentils, Lentil components were characterized by SDS-PAGE immunoblotting.

Results: Twenty of 22 subjects had symptomatic allergy to lentils at the diagnostic time. The most frequent symptoms a ere oropharyngeal symptoms (40%) and acute urticaria (30%); 3 patients also reported symptoms when they were exposed to steam from cooked lentils, In 18 patients, symptoms after lentil ingestion started under 3 years of age (median, 2.7 years). Nine patients had allergic reactions to other legumes: chick peas (6 patients), peas (2 patients), and green beans (1 patient). Immunoblotting patterns obtained with patients' sera showed IgE-binding bands ranging from 14 to 84 kd. Five sera recognized 9 or more IgE-binding bands, and more than 50% of patients who were tested have specific IgE antibodies to 7 components in lentil extract. Conclusion: Allergic reactions to lentils started early in life,

usually below 4 [redacted] of age; oropharyngeal symptoms and acute urticaria were th[redacted]ost common symptoms through in[redacted]tion, and symptomatic reactivity to chick peas is frequently associated.

8/3,AB/58 (Item 6 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07169700 Genuine Article#: 131TN Number of References: 59
Title: Legumes, eggs, and milk
Author(s): Sampson HA (REPRINT)
Corporate Source: CUNY MT SINAI SCH MED,DEPT PEDIAT, 1 GUSTAVE L LEVY PL, BOX 1198/NEW YORK//NY/10029 (REPRINT)
Journal: ALLERGY, **1998**, V53, 46, P38-43
ISSN: 0105-4538 Publication date: 19980000
Publisher: MUNKSGAARD INT PUBL LTD, 35 NORRE SOGADE, PO BOX 2148, DK-1016 COPENHAGEN, DENMARK
Language: English Document Type: ARTICLE

8/3,AB/59 (Item 7 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06939345 Genuine Article#: 105ZG Number of References: 46
Title: Isolation and characterization of proteic allergens in refined **peanut** oil (ABSTRACT AVAILABLE)
Author(s): Olszewski A; Pons L; Moutete F; AimoneGastin I; Kanny G; MoneretVautrin DA; Gueant JL (REPRINT)
Corporate Source: UNIV H POINCARE NANCY,FAC MED, LAB CELLULAR & MOL BIOL NUTR, CNRS, EP 616, BP 184/F-54505 VANDOEUVRE LES NANCY//FRANCE/ (REPRINT); UNIV H POINCARE NANCY,FAC MED, LAB CELLULAR & MOL BIOL NUTR, CNRS, EP 616/F-54505 VANDOEUVRE LES NANCY//FRANCE/; UNIV HOSP CTR NANCY,DEPT ALLERGOL & CLIN IMMUNOL/NANCY//FRANCE/
Journal: CLINICAL AND EXPERIMENTAL ALLERGY, **1998**, V28, N7 (JUL), P 850-859
ISSN: 0954-7894 Publication date: 19980700
Publisher: BLACKWELL SCIENCE LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 0NE, OXON, ENGLAND
Language: English Document Type: ARTICLE
Abstract: Allergic reactions to **peanut** oil are very much debated, even if the responsibility of **peanut** oil has been evoked in several cases of adverse reactions, including death related to severe asthma. The aim of the present study was to investigate the presence of allergenic proteins in **peanut** oil. Proteins were extracted from commercial refined **peanut** oil, with a relative content in the order of 0.1-0.2 mu g per g of oil, and molecular sizes ranging from 14 up to 76 kDa in SDS-PAGE, Eight protein bands were systematically observed in crude, neutralized and refined oils, with a molecular mass ranging from approximate to 14 to 76 kDa, including one at 18 kDa which was identified by Western blot performed with serum from two allergic patients. The protein extract gave positive IgE-RIA with patient sera, positive in vitro leucocyte histamine release tests and positive skin-prick tests in allergic patients. The allergenic protein was purified by HPLC and [I-125] iodide-labelled. It had an isoelectric point at 4.5 in isoelectrofocusing. In conclusion, we have demonstrated the presence of allergenic proteins in crude and refined **peanut** oil. These proteins are the same size as two allergens previously described in **peanut** protein extracts.

8/3,AB/60 (Item 8 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06582310 Genuine Article#: ZC570 Number of References: 27
Title: Immunogenetic analysis of the heavy chain variable regions of IgE from patients allergic to peanuts (ABSTRACT AVAILABLE)
Author(s): Janezic A; Chapman CJ; Snow RE; Hourihane JO; Warner JO; Stevenson FK (REPRINT)
Corporate Source: SOUTHAMPTON UNIV HOSP,MOL IMMUNOL GRP, TENOVUS LAB/SOUTHAMPTON SO16 6YD/HANTS/ENGLAND/ (REPRINT); SOUTHAMPTON UNIV HOSP,MOL IMMUNOL GRP, TENOVUS LAB/SOUTHAMPTON SO16 6YD/HANTS/ENGLAND/; SOUTHAMPTON UNIV HOSP,DEPT CHILD HLTH/SOUTHAMPTON SO16 6YD/HANTS/ENGLAND/
Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **1998**, V101, N3 (MAR), P391-396
ISSN: 0091-6749 Publication date: 19980300
Publisher: MOSBY-YEAR BOOK INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO 63146-3318
Language: English Document Type: ARTICLE
Abstract: Peanuts are one of the most allergenic of the foods, and hypersensitivity responses to **peanut** allergens can be fatal. Although the nature of the antigenic components of peanuts is being defined at the molecular level, there is little information on the induced IgE antibodies, which are central to the allergic reaction. Recognition sites of IgE antibody molecules arise from the variable regions of heavy and light chains (V-H and V-L). By using nested polymerase chain reactions with specific primers for the available repertoire of V-H genes, together with primers in the constant epsilon region, we have amplified V-H sequences of IgE from blood lymphocytes of two patients with **peanut** allergy. After cloning and sequencing the products, we found a predominance of V(H)1 family use in both patients, which was not found in control IgM-specific primers. The IgE V-H sequences were highly somatically mutated, but in only six of 17 cases was there clear evidence for clustering of amino acids indicative of antigen selection. Previous results from patients with allergy to house dust mites have indicated predominance of V(H)5 use and little evidence for antigen selection. Although results from two patients allergic to peanuts must be regarded as preliminary, they do suggest that the IgE response to peanuts may have a different V-H bias, with a similar mutational pattern.

8/3,AB/61 (Item 9 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06575824 Genuine Article#: ZC328 Number of References: 46
Title: A new in vitro model for testing of food allergens: Allergen-specific mediator release of passively sensitized rat basophil leukaemia cells (ABSTRACT AVAILABLE)
Author(s): Hoffmann A; Jamin A; May S; Haustein D; Vieths S (REPRINT)
Corporate Source: PAUL EHRLICH INST,DEPT ALLERGOL, PAUL EHRLICH STR 51-59/D-63225 LANGEN//GERMANY/ (REPRINT); PAUL EHRLICH INST,DEPT ALLERGOL/D-63225 LANGEN//GERMANY/
Journal: FOOD AND AGRICULTURAL IMMUNOLOGY, **1997**, V9, N4 (DEC), P 309-325
ISSN: 0954-0105 Publication date: 19971200
Publisher: CARFAX PUBL CO, PO BOX 25, ABINGDON, OXFORDSHIRE, ENGLAND OX14 3UE
Language: English Document Type: ARTICLE
Abstract: An assay based on allergen-specific mediator release of Pat basophil leukaemia cells (RBL cells) was investigated as a possible new tool for the in vitro testing of food allergens. The RBL-2H3 cells were sensitized passively with diluted murine pool sera containing IgE specific for food and pollen allergens. These sera were obtained from BALB/c mice after low-dose intraperitoneal injection of birch pollen, celery and **peanut** extracts. Comparative immunoblotting with

murine and human IgE demonstrated that the murine IgE response was directed predominantly against known major allergens. Subsequent to sensitization of the RBL cells with antiserum against birch pollen allergens, apple allergy was used as an immunological model of birch pollen related food hypersensitivities. The known cross-reaction of the major allergens of birch pollen and apple was reproduced completely by the mediator release measured in the murine in vitro assay. The ranking of allergenic potency obtained for these allergens agreed closely with the results of histamine release analyses performed with blood samples of allergic patients. In addition, murine sera against celery tuber were used to study the influence of thermal and non-thermal food processing on the allergenic potency of the food. Again, the results corresponded to previous data obtained in allergic humans and indicated a reduction of potency due to the application of heat, but a high residual biological activity in many mildly processed products. Finally, spurious contaminations of **peanut** protein in commercial foods could be detected specifically at a concentration of at least 0.01%. This assay is suitable for many applications in food allergen research.

8/3,AB/62 (Item 10 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06558357 Genuine Article#: ZA911 Number of References: 0
Title: Characterization and epitope analysis of **Ara** h 3, a glycinin involved in **peanut** hypersensitivity.
Author(s): Helm EM; Rabjohn PA; Stanley JS; West CM; Huang SK; Sampson H; Burks AW; Bannon GA
Corporate Source: HENDRIX COLL,DEPT CHEM/CONWAY//AR/72032; UAMS,/LITTLE ROCK//AR/72205; JOHNS HOPKINS UNIV,/BALTIMORE//MD/21218; UAMS,/LITTLE ROCK//AR/72205
Journal: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, **1998**, V215, 1 (APR 2), P179-CHED
ISSN: 0065-7727 Publication date: 19980402
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036
Language: English Document Type: MEETING ABSTRACT

8/3,AB/63 (Item 11 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06337854 Genuine Article#: YK493 Number of References: 59
Title: **Peanut** allergy - current status and future challenges
Author(s): Hourihane JO (REPRINT)
Corporate Source: INST CHILD HLTH,30 GUILFORD ST/LONDON/ON WC1 1EH/CANADA/ (REPRINT); UNIV SOUTHAMPTON,SOUTHAMPTON GEN HOSP/SOUTHAMPTON/HANTS/ENGLAND/
Journal: CLINICAL AND EXPERIMENTAL ALLERGY, **1997**, V27, N11 (NOV), P 1240-1246
ISSN: 0954-7894 Publication date: 19971100
Publisher: BLACKWELL SCIENCE LTD, OSNEY MEAD, OXFORD, OXON, ENGLAND OX2 0EL
Language: English Document Type: REVIEW

8/3,AB/64 (Item 12 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06237973 Genuine Article#: YD649 Number of References: 48
Title: Effect of substituents on the thermodynamics of D-galactopyranoside binding to winged bean (Psophocarpus tetragonolobus) basic lectin (ABSTRACT AVAILABLE)

Author(s): Swaminathan CP; Gupta D; Sharma V; Surolia A (REPRINT)
Corporate Source: IND INST SCI,MOL BIOPHYS UNIT/BAN ORE 560012/KARNATAKA/INDIA/ (REPRINT); INDIAN INST SCI,MOL BIOPHYS UNIT/BANGALORE 560012/KARNATAKA/INDIA/
Journal: BIOCHEMISTRY, **1997**, V36, N43 (OCT 28), P13428-13434
ISSN: 0006-2960 Publication date: 19971028
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036
Language: English Document Type: ARTICLE
Abstract: Isothermal titration calorimetric measurements of the binding of deoxy, fluorodeoxy, and methoxy derivatives of D-galactopyranoside (alpha-D-Gal) to the basic lectin from winged bean Psophocarpus tetragonolobus, WBA I, have been carried out. Each of the ligands binding to WBA I displayed the same stoichiometry of one per subunit (29 kDa) of WBA I. The binding enthalpies for various derivatives are essentially independent of temperature and show complementary changes with respect to binding entropies. Replacement of the hydroxyl group by fluorine or hydrogen on C3 and C4 of the galactopyranoside eliminates binding to the lectin, consistent with C3-OH and C4-OH acting as hydrogen bond donors. The affinity for C2 derivatives of galactose decreases in the order GalNAc > 2MeOGal > 2FGal congruent to Gal > 2HGal, which suggests that both polar and nonpolar residues surround the C2 locus of galactose, consistent with the observed high affinity of WBA I toward GalNAc where the acetamido group at C2 position is probably stabilized by both nonpolar interactions with the methyl group and polar interactions with the carbonyl group. The binding of C6 derivatives follows the order Gal > 6FGal > D-Fuc much greater than 6MeOGal congruent to L-**Ara**, indicating the presence of favourable polar interactions with a hydrogen bond donor in the vicinity. On the basis of these results the hydrogen bond donor-acceptor relationship of the complexation of methyl-alpha-D-galactopyranoside with the primary combining site of WBA I is proposed.

8/3,AB/65 (Item 13 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05849898 Genuine Article#: WY978 Number of References: 33
Title: **Peanut** allergy: Recent advances and unresolved issues
Author(s): Hourihane JO (REPRINT)
Corporate Source: UNIV SOUTHAMPTON,SOUTHAMPTON GEN HOSP/SOUTHAMPTON SO16 6YD/HANTS/ENGLAND/ (REPRINT)
Journal: JOURNAL OF THE ROYAL SOCIETY OF MEDICINE, **1997**, V90, 30, P 40-44
ISSN: 0141-0768 Publication date: 19970000
Publisher: ROYAL SOC MEDICINE PRESS LTD, 1 WIMPOLE STREET, LONDON, ENGLAND W1M 8AE
Language: English Document Type: ARTICLE

8/3,AB/66 (Item 14 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05698959 Genuine Article#: WP185 Number of References: 0
Title: Cloning of a portion of **Ara** h 3: A **peanut** allergen.
Author(s): Helm EM
Corporate Source: HENDRIX COLL,/CONWAY//AR/72032; UAMS,/LITTLE ROCK//AR/72202; JOHNS HOPKINS UNIV,/BALTIMORE//MD/; UNIV ARKANSAS MED SCI HOSP,/LITTLE ROCK//AR/72205
Journal: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, **1997**, V213, 1 (APR 13), P241-CHED
ISSN: 0065-7727 Publication date: 19970413
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036
Language: English Document Type: MEETING ABSTRACT

8/3,AB/67 (Item 15 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05585339 Genuine Article#: WH142 Number of References: 0
Title: Cloning, epitope mapping, and mutual analysis of **Ara** h 2, a major **peanut** allergen.
Author(s): Burks AW; King N; West CM; Stanley JS; Cockrell G; Helm R; Huang SK; Sampson HA; Bannon GA
Corporate Source: UNIV ARKANSAS,SCH MED/LITTLE ROCK//AR/72204; JOHNS HOPKINS UNIV,/BALTIMORE//MD/
Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **1997**, V99, N1,2,S (JAN), P569-569
ISSN: 0091-6749 Publication date: 19970100
Publisher: MOSBY-YEAR BOOK INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO 63146-3318
Language: English Document Type: MEETING ABSTRACT

8/3,AB/68 (Item 16 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05581419 Genuine Article#: WH831 Number of References: 33
Title: Wheat alpha-amylase inhibitor: A second route of allergic sensitization (ABSTRACT AVAILABLE)
Author(s): James JM (REPRINT) ; Sixbey JP; Helm RM; Bannon GA; Burks AW
Corporate Source: UNIV ARKANSAS MED SCI HOSP,ARKANSAS CHILDRENS HOSP, RES INST, DEPT PEDIAT, 800 MARSHALL ST/LITTLE ROCK//AR/72202 (REPRINT); UNIV ARKANSAS MED SCI HOSP,ARKANSAS CHILDRENS HOSP, RES INST, DEPT BIOCHEM/LITTLE ROCK//AR/72202; UNIV ARKANSAS MED SCI HOSP,ARKANSAS CHILDRENS HOSP, RES INST, DEPT MOL BIOL/LITTLE ROCK//AR/72202
Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **1997**, V99, N2 (FEB), P239-244
ISSN: 0091-6749 Publication date: 19970200
Publisher: MOSBY-YEAR BOOK INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO 63146-3318
Language: English Document Type: ARTICLE
Abstract: Background: Low molecular weight allergens may be responsible for hypersensitivity reactions after the ingestion of wheat.

Objective: The purpose of this investigation was to identify relevant, low molecular weight allergens after the ingestion of what protein.

Methods: Serum samples were collected from seven children with wheat allergy and one adult with baker's asthma. Control serum samples were collected from wheat-tolerant patients. Wheat extracts were prepared and separated by sodium dodecylsulfate-polyacrylamide gel electrophoresis (SDS-PAGE) in 12.5% gels revealing numerous protein bands. IgE immunoblot analysis of crude wheat extracts identified multiple IgE-binding proteins. Wheat proteins were separated further with two-dimensional gel electrophoresis, which was followed by IgE immunoblotting investigations.

Results: Immunoblot analysis identified a 15 kd wheat protein that bound IgE from all five children with wheat allergy who were evaluated. No IgE binding to this wheat protein was demonstrated in any of the control subjects. Samples representing the 15 kd wheat protein (isoelective point, 5.85) were selected. The N-terminal peptide sequence of this protein (residues 1 to 20) matched to a what alpha-amylase inhibitor.

Conclusion: These data demonstrate that wheat alpha-amylase

inhibitor is a relevant allergen in patients experiencing hypersensitivity reactions after the ingestion of wheat protein. This wheat protein, which has been implicated as an important allergen in patients with baker's asthma, represents a sensitizing allergen after both ingestion and inhalation.

8/3,AB/69 (Item 17 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05137639 Genuine Article#: VC478 Number of References: 159
Title: THE MOLECULAR-BIOLOGY OF FOOD ALLERGY (Abstract Available)
Author(s): HEFLE SL
Corporate Source: UNIV NEBRASKA,FOOD ALLERGY RES & RESOURCE PROGRAM,351 FOOD IND BLDG/LINCOLN//NE/68583
Journal: IMMUNOLOGY AND ALLERGY CLINICS OF NORTH AMERICA, **1996**, V16, N3 (AUG), P565&
ISSN: 0889-8561
Language: ENGLISH Document Type: REVIEW
Abstract: The use of molecular techniques such as amino acid sequencing, DNA sequencing, molecular cloning, use of synthetic peptides, and monoclonal antibodies in the study of allergenic proteins has resulted in a large amount of information about a wide variety of allergens. The use of recombinant DNA techniques for the study of allergenicity of proteins is in many ways a preferred method to the traditional procedures, and recombinant allergens provide improved tools for allergen standardization, structural investigation, and T- and B-cell epitope identification. In the area of food allergy, molecular biologic advances are modest compared with those in the area of inhalant allergies. In a limited number of cases, recombinant allergens have been produced, but most of the molecular-level knowledge of food allergens has been gained using conventional molecular techniques such as amino acid sequencing and use of synthetic peptides. Much progress in the development of recombinant food allergens is expected in the near future.

8/3,AB/70 (Item 18 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05104511 Genuine Article#: VA791 Number of References: 65
Title: BIOCHEMICAL FEATURES OF GRAIN LEGUME ALLERGENS IN HUMANS AND ANIMALS (Abstract Available)
Author(s): LALLES JP; PELTRE G
Corporate Source: INRA,LAB JEUNE RUMINANT,65 RUE ST BRIEUC/F-35042 RENNES//FRANCE/; INST PASTEUR,UNITE IMMUNOALLERGIE/F-75724 PARIS15//FRANCE/
Journal: NUTRITION REVIEWS, **1996**, V54, N4 (APR), P101-107
ISSN: 0029-6643
Language: ENGLISH Document Type: REVIEW
Abstract: Peanuts and soybeans are the major legumes involved in human food allergy, although some data exist on adverse reactions to temperate legumes including pea, green bean, sweet lupin, and lentil. An increasing number of legume proteins or glycoproteins have been characterized as food allergens. Limited data tend to indicate that they are usually different from legume inhalent allergens. Cross-recognition among legume allergens is immunochemically frequent but clinically less common. A common feature to most legume allergens is their natural resistance to thermal, chemical, and in some way, proteolytic denaturation. Finally, other mammals including preruminant calves, and piglets at the time of weaning, are prone to gut immune-mediated reactions to soybean and pea proteins.

8/3,AB/71 (Item [redacted] from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05104420 Genuine Article#: VA692 Number of References: 50
Title: FOOD ALLERGEN (**PEANUT**)-SPECIFIC T-H2 CLONES GENERATED FROM THE PERIPHERAL-BLOOD OF A PATIENT WITH **PEANUT** ALLERGY (Abstract Available)
Author(s): DEJONG EC; SPANHAAK S; MARTENS BPM; KAPSENBERG ML; PENNINKS AH; WIERENGA EA
Corporate Source: TNO,NUTR & FOOD RES INST,NETHERLANDS ORG APPL SCI RES,POB 360/NL-3700 AJ ZEIST//NETHERLANDS/; TNO,NUTR & FOOD RES INST,NETHERLANDS ORG APPL SCI RES/NL-3700 AJ ZEIST//NETHERLANDS/; UTRECHT TOXICOL CTR/UTRECHT//NETHERLANDS/; ALLERGY CTR/UTRECHT//NETHERLANDS/; UNIV AMSTERDAM,DEPT CELL BIOL & HISTOL/AMSTERDAM//NETHERLANDS/
Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **1996**, V98, N1 (JUL), P73-81
ISSN: 0091-6749
Language: ENGLISH Document Type: ARTICLE
Abstract: Background: Increasing evidence indicates a prominent role of allergen-specific T-H2 cells, with high IL-4 and IL-5 production and low interferon-gamma production, in the regulation of IgE and eosinophil production in allergic disorders. However, most studies have concentrated on T cells reactive with inhalation allergens, whereas little is known about the properties of food allergen-reactive T cells.

Objective: In this study we therefore characterized **peanut** -specific T cells, cloned from a patient with severe **peanut** allergy.

Methods: Peripheral blood mononuclear cells from patients with **peanut** allergy and nonallergic individuals were stimulated with crude **peanut** exb act (CPE) to compare the proliferative responses and to select a suitable patient for the cloning of CPE-specific T cells. The resultant panel of CPE-reactive T-lymphocyte clones was serologically phenotyped by flow cytometry and analyzed for cytokine secretion by ELISA.

Results: The patients' peripheral blood mononuclear cells showed a dose-dependent proliferative response to CPE, which was significantly higher ($p < 0.05$) than in peripheral blood mononuclear cells of nonallergic donors. The CPE-specific T-lymphocyte clones generated from the selected patient were all CD4(+)/CDB- T helper cells with a T-H2 cytokine profile, secreting high amounts of IL-4 and IL-5, but little or no interferon-gamma.

Conclusions: This study demonstrates that **peanut**-specific T cells do occur in the peripheral blood of patients with **peanut** allergy and suggests an increased frequency of these T cells in patients compared with nonallergic control subjects. The CD4(+) phenotype and the T-H2 cytokine profile of the CPE-specific T-lymphocyte clones suggest a functional role of allergen-specific T-H2 cells in the pathophysiology of food allergy, similar to the function of inhalation allergen-specific T-H2 cells.

8/3,AB/72 (Item 20 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04688863 Genuine Article#: UB451 Number of References: 35
Title: VARIATIONS IN THE STRUCTURE OF NEUTRAL SUGAR CHAINS IN THE PECTIC POLYSACCHARIDES OF MORPHOLOGICALLY DIFFERENT CARROT CALLI AND CORRELATIONS WITH THE SIZE OF CELL CLUSTERS (Abstract Available)

Author(s): KIKUCHI A; [redacted]ASHIGE Y; ISHII T; FUJII T; SATO S
Corporate Source: UNIV [redacted]UKUBA,INST BIOL SCI/TSUKUBA/IB[redacted]KI 305/JAPAN/; UNIV TSUKUBA,INST BIOL SCI/TSUKUBA/IBARAKI 305/JAPAN/; FORESTRY & FOREST PROD RES INST/TSUKUBA/IBARAKI305/JAPAN/
Journal: PLANTA, **1996**, V198, N4 (APR), P634-639
ISSN: 0032-0935
Language: ENGLISH Document Type: ARTICLE
Abstract: Carrot (Daucus carota L.) embryogenic callus (EC) loses its embryogenic competence and becomes nonembryogenic callus (NC) during long-term culture. With the loss of embryogenic competence, the cell clusters become smaller and the extent of intercellular attachments is reduced. Pectic fractions prepared from EC and NC were separated into two subfractions by gel filtration. A difference in sugar composition between EC and NC was found only in the high-molecular-mass (ca. 1300 kDa) subfraction, and the ratio of the amount of arabinose to that of galactose (**Ara**/Gal) was strongly and positively correlated with the size of cell clusters in several different cultures. From the results of sugar-composition and methylation analyses, and the results of treatment with exo-arabinanase, models of the neutral sugar chains of pectins from EC and NC are proposed. Both neutral sugar chains are composed of three regions. The basal region is composed of linearly linked arabinan 5-**Ara**(f)) moieties in both types of callus. The middle galactan region is composed of 6-linked galactose, some of which branches at the 3 and 4 positions, and this region is larger and more frequently branched in NC than in EC. Finally, the terminal arabinan region is composed of 5-linked arabinose, branched at the 3 position, and the size of the terminal arabinan is larger in EC than in NC. The significance of the neutral sugar chains of pectins in the interaction of cell wall components and intercellular attachment is discussed.

8/3,AB/73 (Item 21 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04601143 Genuine Article#: TV536 Number of References: 0
Title: CHARACTERIZATION OF THE MAJOR **PEANUT** ALLERGEN **ARA**-H-I ON PROTEIN LEVEL
Author(s): BEEKER WM; BUSCHMANN L; SCHLAAK M
Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, **1996**, V97, N1 (JAN), P589
ISSN: 0091-6749
Language: ENGLISH Document Type: MEETING ABSTRACT

8/3,AB/74 (Item 22 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04495972 Genuine Article#: TH025 Number of References: 37
Title: DUAL INOCULATION OF **PEANUT** WITH GLOMUS SP AND BRADYRHIZOBIUM SP ENHANCED THE SYMBIOTIC NITROGEN-FIXATION AS ASSESSED BY N-15-TECHNIQUE (Abstract Available)
Author(s): KHAN MK; SAKAMOTO K; YOSHIDA T
Corporate Source: CHIBA UNIV,FAC HORT/MATSUDO/CHIBA 271/JAPAN/
Journal: SOIL SCIENCE AND PLANT NUTRITION, **1995**, V41, N4 (DEC), P 769-779
ISSN: 0038-0768
Language: ENGLISH Document Type: ARTICLE
Abstract: The response of **peanut** (Arachis hypogaea L.) to inoculation with vesicular-arbuscular mycorrhizal (VAM) fungi (Glomus etunicatum) and Bradyrhizobium sp. was studied in pots by the acetylene reduction activity (**ARA**) and 'A-value' methods. The soil used was a Light-coloured Andosol and the treatments consisted of the inoculation of VAM fungi only, inoculation of Bradyrhizobium, only, dual

inoculation of VAM fungi and Bradyrhizobium and control, under non-sterilized and sterilized soil conditions.

In the non-sterilized soil the **ARA** and nitrogen fixation determined by the 'A-value' method increased significantly only by dual inoculation of VAM fungi and Bradyrhizobium at 100 days after planting (DAP), but no significant difference was observed at 70 DAP. In the case of dual inoculation, 75% of the nitrogen of the plant was derived from fixation whereas the plants inoculated only with Bradyrhizobium derived 68% of their nitrogen from fixation and the control plants, 64%, Amount of P in plant increased significantly only by dual inoculation with VAM fungi and Bradyrhizobium.

In the sterilized soil a highly significant increase in the **ARA** was observed of the dual inoculation at all the sampling times. Nitrogen fixation determined by the A-value technique and N and P contents in plant also increased significantly by dual inoculation, Results obtained by the A-value method showed that plants with dual inoculation derived 68% of their nitrogen from fixation while the plants inoculated only with Bradyrhizobium, 38%.

From our this study we conclude that nitrogen fixation as well as N and P contents in **peanut** increased significantly only by dual inoculation with VAM fungi and Bradyrhizobium.

8/3,AB/75 (Item 23 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

03881635 Genuine Article#: QN433 Number of References: 0
(NO REFS KEYED)
Title: PEANUTS - ONE OF THE CHIEF SOURCES OF FOOD ALLERGENS (Abstract Available)
Author(s): GUERIN B; GUERIN L
Corporate Source: LAB ALLERBIO/F-55270 VARENNES EN ARGON//FRANCE/
Journal: REVUE FRANCAISE D ALLERGOLOGIE ET D IMMUNOLOGIE CLINIQUE, **1995**, V35, N1 (JAN-FEB), P39-43
ISSN: 0335-7457
Language: FRENCH Document Type: REVIEW
Abstract: Peanuts are increasingly present in the diet without the consumer being aware. They take a number of forms, having undergone various industrial processes. They enter into the composition of breakfast cereals, biscuits, breads, snacks, milks and dairy products, ice creams, drinks, soups and meat substitutes. The main reasons for their use are protein enrichment and improvement in the theological properties of the finished product. Various allergens have been identified : **Peanut** 1, **Ara** h I and **Ara** h II. Patients who are allergic to peanuts must be warned to be cautious and to carefully check the composition of the food products in their diet until such time as specific labelling to indicate the presence of peanuts has been made obligatory.

8/3,AB/76 (Item 24 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

03860898 Genuine Article#: QM223 Number of References: 31
Title: NITROGEN-FIXATION IN **PEANUT** AT VARIOUS CONCENTRATIONS OF N-15-UREA AND SLOW-RELEASE N-15-FERTILIZER (Abstract Available)
Author(s): KHAN MK; YOSHIDA T
Corporate Source: CHIBA UNIV,FAC HORT/MATSUDO/CHIBA 271/JAPAN/
Journal: SOIL SCIENCE AND PLANT NUTRITION, **1995**, V41, N1 (MAR), P 55-63

ISSN: 0038-0768
Language: ENGLISH Document Type: ARTICLE
Abstract: Nitrogen fixation of **peanut** (Arachis hypogaea L.) was studied using pots (1 kg soil/pot) at various concentrations of N-15-urea and N-15-super-IB (a slow release N fertilizer). The soil used was an Andosol with the following characteristics pH 6.02, CEC 23.4 cmol(+) kg(-1), total-C 20.9 g kg(-1), total-N 2.5 g kg(-1), and a loam texture. The number and weight of the nodules and acetylene reduction activity (**ARA**) decreased by the addition of N-15-urea but not by the addition of N-15-super-IB even at higher doses. Irrespective of the type of fertilizer or the amount of nitrogen applied, the highest **ARA** of the crop was observed between 75 and 98 d after sowing (DAS). Nitrogen fixation determined by the A-value method showed that the addition of higher doses of N-15-urea markedly decreased the fixation, unlike that of N-15-super-IB. At 75 DAS the percentage of nitrogen derived fr om fixation (%Ndfa) at 100, 200, and 400 mg N per pot was 61, 54, and 29 (333, 308, and 171 mg N per plant), respectively when N was applied as N-15-urea, and 63, 62, and 61 (333, 343, and 349 mg N per plant), respectively when applied as N-15-super-IB. The %Ndfa at 98 DAS in **peanut** treated with 100, 200, and 400 mg N per pot was 69, 63, and 52 (719, 688, and 578 mg N per plant), respectively when N was applied as N-15-urea and the %Ndfa at the same doses of N-15-super-IB was 69, 68, and 64 (773, 789, and 787 mg N per plant), respectively. Hence, it can be concluded that the symbiotic nitrogen fixation of **peanut** was not suppressed by the addition of slow release N-fertilizer even at higher doses under the current experimental conditions.

8/3,AB/77 (Item 25 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

03424332 Genuine Article#: PE321 Number of References: 50
Title: EPITOPE MAPPING OF MONOCLONAL-ANTIBODIES DIRECTED AGAINST LIPOPHOSPHOGLYCAN OF LEISHMANIA-MAJOR PROMASTIGOTES (Abstract Available)
Author(s): KELLEHER M; CURTIS JM; SACKS DL; HANDMAN E; BACIC A
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,POST OFF/MELBOURNE/VIC/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/MELBOURNE/VIC/AUSTRALIA/; NIAID,PARASIT DIS LAB/BETHESDA//MD/20892; UNIV MELBOURNE,SCH BOT,PLANT CELL BIOL RES CTR/MELBOURNE/VIC 3052/AUSTRALIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, **1994**, V66, N2 (AUG) , P187-200
ISSN: 0166-6851
Language: ENGLISH Document Type: ARTICLE
Abstract: Monoclonal antibodies (MAbs) were generated against Leishmania major promastigote lipophosphoglycan (LPG) to use as tools in defining functional epitopes of this major cell surface glycoconjugate. Epitope mapping of four MAbs, designated 4A2-A2, 2G11-A3, 5E6-D10 and 5E10-F2, revealed that the phosphorylated oligosaccharide repeat unit PO4-6[Gal(beta 1-3)]Gal(beta 1-4)Man alpha 1-, P3, is a highly immunogenic epitope which has previously been demonstrated, by chemical analyses, to be a repeat unit specific to L. major. Two antibodies, 4A2-A2 and 5E10-F2, also recognised the repeat unit PO4-6[**Ara** (beta 1-2)Gal(beta 1-3)]Gal(beta 1-4)Man alpha 1-, P4a, with less affinity than P3, while 2G11-A3 recognised P4a with greater affinity than for P3. The L. major metacyclic-specific antibody 3F12 only recognised repeat units terminating with arabinose residues. In particular, 3F12 recognised P4a, which is upregulated in metacyclic LPG compared to the procyclic form of the molecule. The oligosaccharides P3, P4a and P5a are specific to L. major LPG. The epitopes of 4A2-A2, 2G11-A3, 5E6-D10 and 5E10-F2 were found on the cell surface and in the flagellar pocket of both procyclic and metacyclic V121 promastigotes,

but were only detected at very low levels on amastigotes. The repeat unit P3 is able to inhibit attachment of procyclic promastigotes to the midgut of the sandfly vector, but neither Fab fragments of the four antibodies nor purified P3 could inhibit attachment of metacyclic promastigotes to the macrophage cell line J774. It was also shown that human sera from patients with cutaneous leishmaniasis recognised purified P3. The data suggests that while P3 is an immunogen in the natural course of infection of the human host, P3 plays no role in attachment and internalisation of promastigotes into the macrophages of the mammalian host.

8/3,AB/78 (Item 26 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01241595 Genuine Article#: GH214 Number of References: 26
Title: ASSOCIATIVE N-2-FIXATION IN PLANTS GROWING IN SALINE SODIC SOILS AND ITS RELATIVE QUANTIFICATION BASED ON N-15 NATURAL ABUNDANCE (Abstract Available)
Author(s): MALIK KA; BILAL R; RASUL G; MAHMOOD K; SAJJAD MI
Corporate Source: NUCL INST AGR & BIOL/FAISALABAD//PAKISTAN/; PAKISTAN INST NUCL SCI & TECHNOL/RAWALPINDI//PAKISTAN/
Journal: PLANT AND SOIL, **1991**, V137, N1, P67-74
Language: ENGLISH Document Type: ARTICLE
Abstract: Saline-sodic soils are characterized by a very low nitrogen and organic matter content and thus are practically non fertile. However under these conditions, certain plants have been found to grow luxuriantly. One of such plants, Leptochloa fusca (Kallar grass) has exhibited nitrogenase activity associated with its roots as determined by acetylene reduction assay (**ARA**). Quantification of such nitrogen fixation was also carried out using N-15 isotope dilution technique.

In addition to Kallar grass, other plant species growing in saline sodic soils namely Atriplex amnicola, A. lentiformis, Sporobolus sp., Kochia indica, Desmostachya bipinnata, Cynodon dactylon, Suaeda fruiticosa and Polypogon monspilensis have been screened for the presence of root associated nitrogenase activity. Some of the plant species tested showed high excised root acetylene reduction activity (ERARA). Isolation of diazotrophs from various fractions of the rhizosphere has also been carried out. Azospirillum was the dominant organism in niches closer to the roots, whereas there was a preponderance of the members of the family Enterobacteriaceae in general.

In order to have a relative estimate of the nitrogen fixing ability of different plant species screened, the delta N-15 values of plant tops were estimated and were correlated with their **ARA** values. The delta C-13 values of these plants were also determined which indicated that all the plants tested except P. monspilensis had the C-4 photosynthetic pathway.

8/3,AB/79 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts

03728220 CAB Accession Number: 991406394
Identification and partial characterization of multiple major allergens in **peanut** proteins.
Jong, E. C. de; Zijverden, M. van; Spanhaak, S.; Koppelman, S. J.; Pellegrom, H.; Penninks, A. H.
TNO Nutrition and Food Research Institute, Immunotoxicology group, Zeist, Netherlands.

Clinical and Experimental Allergy vol. 28 (6): p.743-751
Publication Year: 1998
ISSN: 0954-7894 --
Language: English
Document Type: Journal article

Peanut (groundnut) protein-specific Ig concentrations as well as their recognition of the various **peanut** proteins or protein subunits were determined in the plasma of **peanut** -allergic (PA) and non-allergic (NA) individuals. Two **peanut** allergens were characterized in more detail to confirm them as the earlier described **Ara** h1 and **Ara** h2. The presence of Ig-binding sites in **peanut** proteins was studied by immunoblotting assays, the concentrations of **peanut**-specific Ig was determined by ELISA. **Peanut** proteins were found to contain multiple binding sites for Ig. Six proteins were recognized by **peanut**-specific IgE present in more than 50% of the plasma samples of the PA group. Their molecular weights were approx equal to 44, 40, 33, 21, 20 and 18 kDa. The last 3 protein bands were recognized by **peanut**-specific IgE present in more than 70% of the PA plasma samples and were thought to contain **Ara** h2. This allergen as well as another protein that was thought to be **Ara** h1, which was not recognized by the majority of the patients' IgE-containing plasma samples, were isolated and the N terminal amino acid sequence was determined. **Peanut** protein-specific IgA, IgM, IgG and IgG-subclasses showed a more diverse recognition pattern of **peanut** protein in the PA group compared to the NA group. No differences were found in the plasma concentrations of **peanut** protein-specific Ig of the various classes between the PA and NA group. It is concluded that peanuts contain multiple allergens, of which 6 can be described as major allergens, **Ara** h2 included. In our population **Ara** h1 is not a major allergen. The recognition of **peanut** proteins by Ig is more diverse in PA individuals compared with NA individuals which is not substantiated in the concentrations of **peanut**-specific Ig in plasma, other than IgE. 40 ref.

8/3,AB/80 (Item 2 from file: 50)
DIALOG(R)File 50:CAB Abstracts

03590320 CAB Accession Number: 980404750

T-cell reactivity for a **peanut**-derived epitope in the skin of a young infant with atopic dermatitis.

Reijsen, F. C. van; Felius, A.; Wauters, E. A. K.; Bruijnzeel-Kooman, C. A. F. M.; Koppelman, S. J.
Department of General Pediatrics and Infectious Diseases, University Hospital for Children and Youth "Het Wilhelmina Kinderziekenhuis", 3508 GA Utrecht, Netherlands.

Journal of Allergy and Clinical Immunology vol. 101 (2 pt 1): p.207-209
Publication Year: 1998
ISSN: 0091-6749 --
Language: English
Document Type: Journal article

The presence of cow milk- and **peanut** (groundnut)-specific T cells in the skin of a 6-month-old male infant in the Netherlands with atopic dermatitis was investigated. Cow milk allergy had been diagnosed and there was a family history of food allergies. Groundnuts and groundnut-derived products had been thoroughly omitted from the patient's environment until the time of testing. A skin biopsy of the lesional atopic dermatitis was conducted and serum and blood samples were obtained. Specific serum immunoglobulin E (IgE) was detected (by RAST) for cow milk, although no significant T-cell reactivity for casein, alpha -lactalbumin or beta -lactoglobulin was found in the patient's skin. It is suggested that this may have been because of the low number of cow milk-specific T cells in chronically inflamed atopic dermatitis skin, compared with early

allergen-triggered, eczematous reaction sites. Although the skin-derived T-cell clone SE1.41 [redacted] reactive to crude groundnut extract (not to crude soya extract) and was specific for the major groundnut allergen **Ara** h 1, specific serum IgE for groundnut was not detected at the initial sampling. Three months after referral, serum gave positive RAST results for cow milk and groundnut, but not for soya. It is concluded that food allergen-specific T cells can be isolated from the skin of an infant with atopic dermatitis, even before detectable food-specific serum IgE. It is also suggested that T-cell reactivity for a groundnut-derived epitope may develop in a young infant despite thorough avoidance of groundnut proteins. 4 ref.

8/3,AB/81 (Item 3 from file: 50)
DIALOG(R)File 50:CAB Abstracts

03150029 CAB Accession Number: 951414943
Epitope specificity of the major **peanut** allergen, **Ara** hII.
Burks, A. W.; Cockrell, G.; Connaughton, C.; Karpas, A.; Helm, R. M.
Department of Pediatrics, University of Arkansas for Medical Sciences, Arkansas Children's Hospital, 800 Marshall St., Little Rock, AR 72202, USA.
Journal of Allergy and Clinical Immunology vol. 95 (2): p.607-611
Publication Year: 1995
ISSN: 0091-6749 --
Language: English
Document Type: Journal article
The antigenic and allergenic structure of **Ara** h II, a major allergen of peanuts, was investigated with the use of 4 monoclonal antibodies obtained from BALB/c mice immunized with purified **Ara** h II. Previous studies with monoclonal antibodies generated to **peanut** allergens showed this method to be useful for epitope mapping. When used as a solid phase in an ELISA, these monoclonal antibodies captured **peanut** antigen, which bound IgE from patients with positive **peanut** challenge responses. The **Ara** h II monoclonal antibodies were found to be specific for **peanut** antigens when binding for other legumes was examined. In ELISA inhibition studies with the monoclonal antibodies, 2 different antigenic sites on **Ara** h II were identified. In similar studies with pooled IgE serum from patients with positive challenge responses to peanuts, 2 closely related IgE-binding epitopes were identified. These characterized monoclonal antibodies to **Ara** h II will be useful for future studies to immunoaffinity purify the **Ara** h II allergen and to use in conjunction with recombinant technology for determining structure-function relations. 20 ref.

8/3,AB/82 (Item 1 from file: 76)
DIALOG(R)File 76:Life Sciences Collection

02445578 4633741
Selective Cloning of **Peanut** Allergens, Including Profilin and 2S Albumins, by Phage Display Technology
Kleber Janke, T.; Crameri, R.; Appenzeller, U.; Schlaak, M.; Becker, W. M.
Forschungszentrum Borstel, Biochemische und Molekulare Allergologie, Parkallee 22, D-23845 Borstel (Germany)
International Archives of Allergy and Immunology vol. 119, no. 4, pp. 265-274 (**1999**)
ISSN: 1018-2438
DOCUMENT TYPE: Journal article LANGUAGE: ENGLISH
SUBFILE: Immunology Abstracts

Peanut kernels contain many allergens able to elicit IgE-mediated type 1 allergic reactions in sensitized individuals. Sera from sensitized

patients recognize variable patterns of IgE-binding proteins. The identification of the IgE-binding proteins of **peanut** extract would faciliate improvement of diagnostic and immunotherapeutic approaches as well as development of sensitive test systems for the detection of hidden **peanut** allergens present as additives in various industrial food products and the investigation of their stability during processing of food products. We applied the pJuFo cloning system based on the phage surface display of functional cDNA expression products to clone cDNAs encoding **peanut** allergens. Sera (n = 40) of **peanut**-allergic individuals were selected according to case history, radioallergosorbent test and immunoblot analysis to demonstrate IgE binding towards the newly identified recombinant allergens. In addition to the known allergens **Ara** h 1 and **Ara** h 2 we were able to identify four allergens with estimated molecular weights of 36, 16, 14.5 and 14 kDa. Three of them formally termed **Ara** h 4, **Ara** h6 and **Ara** h 7 show significant sequence similarities to the family of seed storage proteins and the fourth (**Ara** h 5) corresponds to the well-known plant allergen profilin. Immunoblotting of the six expressed recombinant allergens with 40 patients sera shows 14 individual recognition patterns and the following frequency of specific IgE binding: **Ara** h 1 was recognized by 65%, **Ara** h 2 by 85%, **Ara** h 4 by 53%, **Ara** h 5 by 13%, **Ara** h 6 by 38% and **Ara** h 7 by 43% of the selected sera. All of the selected **peanut**-positive sera can detect at least one of the six identified recombinant allergens which can be used to establish individual patients' reactivity profiles. A comparison of these profiles with the clinical data will possibly allow a further insight into the relationship between clinical severity of the symptoms and specific IgE levels towards the six **peanut** allergens.

8/3,AB/83 (Item 2 from file: 76)
DIALOG(R)File 76:Life Sciences Collection

02179978 4104253
Major **peanut** allergen **ara** h II
UNIVERSITY OF ARKANSAS
PATENT NUMBER: US 5558869
(**19960924**)
DOCUMENT TYPE: Patent LANGUAGE: ENGLISH
SUBFILE: Medical and Pharmaceutical Biotechnology Abstracts

Peanut allergen **Ara** h II was identified using the sera of patients who had atopic dermatitis and a positive food challenge to **peanut**. The **Ara** h II allergen, having a molecular weight of 17 kD and a pI of 5.2, was isolated by anion exchange chromatography. **Ara** h II may be used to detect and quantify **peanut** allergens in foodstuffs.

8/3,AB/84 (Item 1 from file: 203)
DIALOG(R)File 203:AGRIS

02182224 AGRIS No: 97-144874
Dual inoculation of **peanut** [Arachis hypogaea] with Glomus sp. and Bradyrhizobium sp. enhanced the symbiotic nitrogen fixation as assessed by 15N-technique
Khan, M.K. (Chiba Univ., Matsudo (Japan). Faculty of Horticulture); Sakamoto, K.; Yoshida, T.
Journal: Soil Science and Plant Nutrition, Dec 1995, v. 41(4) p. 769-779
Language: English Summary Language: English
The response of **peanut** (Arachis hypogaea L.) to inoculation with vesicular-arbuscular mycorrhizal (VAM) fungi (Glomus etunicatum) and Bradyrhizobium sp. was studied in pots by the acetylene reduction activity

(**ARA**) and "A-value" methods. The soil used was a light-coloured Andosol and the treatments consisted of the inoculation of VAM fungi only, inoculation of Bradyrhizobium only, dual inoculation of VAM fungi and Bradyrhizobium and control, under non-sterilized and sterilized soil conditions. In the non-sterilized soil the **ARA** and nitrogen fixation determined by the "A-value" method increased significantly only by dual inoculation of VAM fungi and Bradyrhizobium at 100 days after planting (DAP), but no significant difference was observed at 70 DAP. In the case of dual inoculation, 75% of the nitrogen of the plant was derived from fixation whereas the plants inoculated only with Bradyrhizobium derived 68% of their nitrogen from fixation and the control plants, 64%. Amount of P in plant increased significantly only by dual inoculation with VAM fungi and Bradyrhizobium. In the sterilized soil a highly significant increase in the **ARA** was observed of the dual inoculation at all the sampling times. Nitrogen fixation determined by the A-value technique and N and P contents in plant also increased significantly by dual inoculation. Results obtained by the A-value method showed that plants with dual inoculation derived 68% of their nitrogen from fixation while the plants inoculated only with Bradyrhizobium, 38%. Rom our this study we conclude that nitrogen fixation as well as N and P contents in **peanut** increased significantly only by dual inoculation with VAM fungi and Bradyrhizobium.

8/3,AB/85 (Item 2 from file: 203)
DIALOG(R)File 203:AGRIS

02044319 AGRIS No: 96-133512
Nitrogen fixation in **peanut** [Arachis hypogaea] at various concentrations of 15N-urea and slow release 15N-fertilizer
Khan, M.K. (Chiba Univ., Matsudo (Japan). Faculty of Horticulture); Yoshida, T.
Journal: Soil Science and Plant Nutrition, Mar 1995, v. 41(1) p. 55-63
Language: English Summary Language: English
Nitrogen fixation of **peanut** (Arachis hypogaea L.) was studied using pot (1 kg soil/pot) at various concentrations of 15N-urea and 15N-super-IB (a slow release N fertilizer). The soil used was an Andosol with the following characteristics pH 6.02, CEC 23.4 cmol(+) kg(-1), total-C 20.9 g kg(-1), total-N 2.5 g kg(-1), and a loam texture. The number and weight of the nodules and acetylene reduction activity (**ARA**) decreased by the addition of 15N-urea but not by the addition of 15N-super-IB even at higher doses. Irrespective of the type of fertilizer or the amount of nitrogen applied, the highest **ARA** of the crop was observed between 75 and 98 d after sowing (DAS). Nitrogen fixation determined by the A-value method showed that the addition of higher doses of 15N-urea markedly decreased the fixation, unlike that of 15N-super-IB. At 75 DAS the percentage of nitrogen derived from fixation (%Ndfa) at 100, 200, and 400 mg N per pot was 61, 54, and 29 (333, 308, and 171 mg N per plant), respectively when N was applied as 15N-urea, and 63, 62, and 61 (333, 343, and 349 mg N per plant), respectively when applied as 15N-super-IB. The %Ndfa at 98 DAS in **peanut** treated with 100, 200, and 400 mg N per pot was 69, 63, and 52 (719, 688, and 578 mg N per plant), respectively when N was applied as 15N-urea and the %Ndfa at the same doses of 15N-super-IB was 69, 68, and 64 (773, 789, and 787 mg N per plant), respectively. Hence, it can be concluded that the symbiotic nitrogen fixation of **peanut** was not suppressed by the addition of slow release N-fertilizer even at higher doses under the current